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SPACE AND HISTORY

Reflections on the Closed-Space Doctrines of Turner and Mackinder and the Challenge of Those Ideas by the Air Age [1]

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Part 1

THE IDEA OF CLOSED SPACE

The idea of closed space is derived from the fact that all unoccupied lands, or lands occupied by undeveloped peoples, have been appropriated—that no wholly new lands are available. The simple geographical fact is one thing, but its significance to man, to his past and future, became the subject of speculation which has had, and still has, a profound effect upon the policies of nations. As applied to the United States, the idea is associated particularly with the influence of Frederick Jackson Turner, who, in 1893, at the world exposition celebrating the four-hundredth anniversary of the Columbian discovery, called attention dramatically to the passing of the American frontier. In Europe, as applied to the world scene, the idea stems most conspicuously from the writing of the British geographer, Sir Halford J. Mackinder. The purpose of this paper is to examine the ideas of these two men and their influence in particular, and along with them the somewhat different views of Josiah Strong, Alfred T. Mahan, and Sir William Crookes, and finally to raise the issue of the implications of the air age in relation to the idea of closed space.

Frederick Jackson Turner

For half a century the school of historians who professed to follow the teachings of Frederick Jackson Turner (1861–1932) dominated the writing of American history, and only in the last of the five decades has there been any substantial challenge to the adequacy of their version of the frontier formula. The ideas basic to Turner's own statement of the significance of the frontier in American history may be pieced together in a brief and simple form—it was too simple—a fact that violated the fundamental principles of social causation as the complex product of the unique interaction of multiple causes.[2] It was undoubtedly this simplicity, however, which explains its powerful appeal to those who are satisfied only with simple certainties. "American social development," he said, "has been continually beginning over again on the frontier," and "this fluidity . . . furnish[es] the forces dominating American character." Also, he insisted that "the settlement of . . . questions for one frontier served as a guide for the next." Among the forces stressed first was that "The frontier is the line of most rapid and effective Americanization . . . . a steady movement away from the influence of Europe, a steady growth of independence on American lines." Furthermore, it exerted a "nationalizing tendency"; it was "productive of individualism"; but "the most important effect of the frontier has been in the promotion of democracy here and in Europe."

Two ideas in Turner's original essay that are fundamental, although not quoted widely, are found in its concluding paragraph. The first is the escape idea, or a form of the safety-valve doctrine so carelessly exploited by some of his students: "in spite of environment, and in spite of custom, each frontier did indeed furnish a new field of opportunity, a gate of escape from the bondage of the past. . . ." The second gives a final flashback to the world setting in contrast with the American and the suggestion that the end of the nineteenth century marked the end of European expansion ushered in by the Columbian discovery of America as well as the passing of the American frontier. Although speaking at the Columbian Exposition, apparently he did not intend to imply a parallel, and certainly not to stress it, as his reference was

[1] Presented in part as the presidential address at the annual meeting of the Agricultural History Society at Washington, D. C., on Feb. 14, 1944.

[2] See Turner's essay, "The Significance of the Frontier in American History (1893)," in his volume, *The Frontier in American History*, 1–38(New York, 1920). The passages here quoted are on pages 2–4, 10, 29–30, and 37–38.

only by way of emphasis upon his American theme. In conclusion he remarked:

> He would be a rash prophet who should assert that the expansive character of American life has now entirely ceased. Movement has been its dominant fact, and, unless this training has no effect upon a people, the American energy will continually demand a wider field for its exercise. . . . the frontier has gone, and with its going has closed the first period of American history.

In emphasizing the frontier aspect of Turner's thinking, the present author is well aware that Turner laid much stress upon the problem of sections, that he wrote an essay on this significance in American history, and that some of his disciples insist that the interpretation of sections, not the frontier, was his principal contribution.[3] Irrespective of such suggestions, however, Turner has been remembered by his students, and his influence has been measured primarily by the famous essay on "The Significance of the Frontier in American History," and no dressing up will change the basic message of the sentence: "The existence of an area of free land, its continuous recession, and the advance of American settlement westward, explain American development." It was the conclusion that the frontier in this sense had come to an end that crystallized the interpretation and gave to it the peculiar force which impressed his readers.

The development of Turner as a historian and of the school that followed him parallels fairly closely a similar development in the biological sciences and to some degree probably is a product of the doctrine of the origin of species. The post-Darwinian scientific world accepted evolution but disagreed on how it took place. The war was waged between the geneticists and the environmentalists. A similar conflict was in progress in the field of the social sciences. Herbert Baxter Adams and the school of thought against which Turner protested were geneticists so far as social institutions were concerned, stressing continuity and the transit of European culture across the Atlantic. Turner and his school were environmentalists and stressed differences rather than continuing similarities.

In an earlier article the present author has pointed out that, "among other things, the frontier hypothesis is an agricultural interpretation of American history which is being applied during an industrial-urban age, an isolationist interpretation in an international age, and a geographical interpretation stressing the passing of the frontier and raising the question of the consequences of this closed system upon the character of American institutions. In many respects it is this third implication, the doctrine of closed space, which was the most revolutionary consequence of Turnerism."[4] In only one of his major essays did Turner indicate explicitly the nature of the changes in the social order which he thought resulted from the passing of the frontier. This is found in his presidential address before the American Historical Association in 1910 under the indefinite title "Social Forces in American History."[5] It is evident from this title that he had no special theory to announce as he had done in spotlighting the significance of the frontier and the sections in his earlier interpretative essays. "Two ideals were fundamental in traditional American thought," he said, individual freedom, with its corollary that "government was an evil," and democracy—" 'government of the people, by the people and for the people.' " Whether he approved or disapproved, he did not say, but he pointed out:

> The present finds itself engaged in the task of readjusting its old ideals to new conditions and is turning increasingly to government to preserve its traditional democracy. It is not surprising that socialism shows noteworthy gains as elections continue; that parties are forming on new lines; that the demand for primary elections, for popular choice of senators, initiative, referendum, and recall, is spreading, and that the regions once the center of pioneer democracy exhibit these tendencies in the most marked degree. They are efforts to find substitutes for that former safeguard of democracy, the disappearing free lands. They are the sequence to the extinction of the frontier.

Turner was a historian and not a prophet; he had pointed out how government was being used to protect the common man against the misuse of economic power in the hands of a few; his discussion of the interventions of government had been in terms of preserving the freedom of the individual and democracy, and not of destroying them, and he was not predicting whether such interventions would prove adequate to the task.

[3] "The Significance of the Section in American History (1925)," in his volume, *The Significance of Sections in American History*, 22–51 (New York, 1932).

[4] James C. Malin, "Mobility and History," in *Agricultural History*, 17:177 (October 1943).

[5] *The Frontier in American History*, 311–334. The passages here quoted are on pages 320–321.

In the United States in the 1890s the American people responded enthusiastically to the Turner idea as history. It seemed to be an explanation and a justification of the leading national characteristics of the final third of the nineteenth century: nationalism, which became a reality to this generation following the Civil War; individualism, of which they were acutely aware because it was being challenged by the public interest theory of governmental regulation; and democracy, of which there was a new consciousness growing out of the cycle of reform agitation culminating in the early nineties. It seemed to confirm Americans in their continental isolationism. Was not their United States a unique civilization; was it not superior to that of Europe and Asia? Culture-conscious Americans had been preaching for some time that they were a God-chosen people whose mission was to carry these ideas and institutions to the backward peoples of the world. Only in a limited degree, however, did the United States participate in the final end-of-the-century scramble for the last unattached islands of the Pacific, getting only the Phillipines, the Hawaiian Islands, and part of the Samoan group. Continentalism and individualism were too strong and left the United States mentally unprepared at that stage to compete seriously for a share of world space.

Halford J. Mackinder

Traditionally, considerations of Turner have been cast on the provincial stage of American history. About the same time, however, that Turner was enunciating for historical purposes the doctrine of closed space as applied to the United States, Halford J. Mackinder(1861–) was propounding a similar doctrine as applied to the globe. In a paper before the Royal Geographical Society on January 25, 1904, he presented the view that the Columbian world as a period of geographical expansion lasting about four hundred years came to an end about the opening of the twentieth century. The same basic idea appeared in his book, *Democratic Ideals and Reality* (1919). Mackinder stressed the point that mankind, with no new lands to discover, explore, and exploit, faced a future within a closed globe and his activities were limited to the ordering of his living within this known available closed space.

In 1905 Mackinder formulated his concept of "manpower as a measure of national and imperial strength." As he restated it in 1919, "In that term is implicit not only the idea of fighting strength but also that of productivity, rather than wealth, as the focus of economic reasoning."[6] This is a revolutionary idea. It became the heart of his concept of "Social Momentum" and imparted a special significance to his idea of society as a "Going Concern." When he set off the Columbian world as a unified period of history terminating at the twentieth century, more was involved than the idea of closed space. In the transition from the Medieval to the Columbian world, the principle of the use of land in exchange for services gave way to the accumulation and ownership of cash capital as the instrument of power. In the passing of the Columbian world, the Columbian form of capitalism was represented as being transformed by the introduction of the concept of the productivity of the Going Concern. In other words the capacity to produce economic goods became the central idea of the social system. The character of any civilization is determined by the nature of the factor through which power is wielded in society. The power derived from the Medieval use of land had yielded to the power derived from accumulated wealth, and it in turn was displaced by the power implicit in the capacity to produce. The Medieval social system had been based on group organization, the Columbian on the individual, and the Going Concern on a mechanized totalitarian society. In such a system there was no room for individual rights—for individual nonconformity. The state as a Going Concern was paramount, or it lacked the distinguishing characteristic of efficiency in social organization and could not survive the rivalry of competing Going Concerns. The individual became merely an impersonal unit of manpower in the service of the state. Whether or not Mackinder intended it in that way is immaterial, the logic of the sequences seem unavoidable.

So far as the present author is aware, the parallel between Turner and Mackinder has never been pointed out, and to reconsider Turner in this relationship imparts to the frontier hypothesis a new meaning. It would be a mistake to assume that the idea of closed space was original with either Turner or Mackinder. It was "in the air" during the last two decades of the nineteenth century and appears in many forms in the literature of the period. The Turner and Mackinder expressions of the idea gained recognition over other versions only because of the influence they came to wield in

[6] *Democratic Ideals and Reality*, preface to ed. 1.

their respective fields. Their originality lay primarily in the synthesis and the application they made of ideas already rather generally available. This statement should not be taken as minimizing either man, because what are usually called new ideas are almost always of that character. The idea of closed space has been implicit in the writing of many who probably were not thinking of it consciously in such terms. Often it was present explicitly, but reader interest did not register it because attention was focused on something else. Once the idea is brought to conscious attention, however, it seems to appear everywhere.

In tracing the history of ideas there is a tendency to identify exact sequences in thought from one man to another and to say the second man got his idea from the first, citing title and page. Sometimes this direct influence is a fact that can be proven, but probably more often such procedures are fundamentally false. In any age certain characteristic ideas are in the air, and the second man may never have heard of the work of the first although the historian of ideas places them in sequence. Even the formulation of abstract ideas by the great philosophers is understandable only as a folk process in which many were saying much the same thing without knowing of each other. The great thinkers of the age were probably only the more successful synthesizers or perhaps merely publicizers of the common fund of ideas fermenting in their age. Therefore, the attempt to identify man-to-man transmission of specific ideas as it appears in the histories is frequently, if not usually, essentially false as a historical procedure. An understanding of the evolution of thought must be grounded in a comprehensive assimilation of the whole content of the age, the expression of the little people as well as the great, because the great are the beneficiaries of folk process and are probably seldom so much true creators as channels through which the folk process finds its fullest expression in explicit language which makes it a matter of record.

Josiah Strong

In 1884, the year Turner was graduated at the University of Wisconsin, and therefore several years prior to the formulation of his frontier hypothesis, the Reverend Josiah Strong (1847–1916) was writing a book which had as its thesis the significance, both to the United States and to the world, of the exhaustion of public lands.[7] He argued that "The closing years of the nineteenth century are one of the great focal points in history. It is proposed to show that the progress of Christ's kingdom in the world for centuries to come depends on the next few years in the United States." The Trans-Mississippi West was to dominate the United States, and in his opinion there were seven perils to be overcome if the United States was to fulfill its destiny. They were the dangers associated with immigration, Romanism, Mormonism, intemperance, socialism, wealth, and, most threatening of all, the city, because all the other perils, except Mormonism, appeared in the most aggravated form in the city. He pointed out the "Meaning of cheap public lands, and significance of their occupation. . . . and, hence, the future of the nation [was] to be determined by 1900." He argued that "the race [was being] schooled for the competition with other races, which will begin as soon as the pressure of population on the means of support is felt in the United States."

Emphasizing acceleration in the rate of change in civilization, Strong viewed the nineteenth century as the significant culminating period under the influence of steam and electricity. The nineteenth was the century of inventions, of modern science, and of "the *great ideas* which have become the fixed possession of men within the past hundred years"—particularly, individual liberty—"the idea that the government exists for the individual." Strong did not claim for the nineteenth century the origin of these things, only that during that period they became an effective part of the human heritage.

[7] Josiah Strong, *Our Country: Its Possible Future and Its Present Crisis* (New York, Published by Baker and Taylor Company for the American Home Missionary Society, 1885). The passages here quoted are on pages viii, x, 4, 6, 7, 14, 15, 28, 154–155, 160, and 174–176.

This book was widely distributed at 25 cents in paper and 50 cents in cloth binding. The present author's copy is marked 55th thousand. Among the endorsements printed on the back leaves is one by the young professor of economics at Johns Hopkins, Richard T. Ely, one of the men under whom Turner studied. His comment is that "It contains precisely the information people need." It would be interesting to know how much influence this book had, either directly or indirectly, on Turner.

With respect to the Trans-Mississippi West as the seat of power, he declared:

> ...twenty years of this century may outmeasure a millennium of olden time.... [and] ten years of the New West are... fully equal to half a century east of the Mississippi.... The West is characterized by largeness. Western stories are on the same large scale, so large, indeed, that it often takes a dozen eastern men to believe one of them.... the West is to dominate the East.

Strong's discussion of the exhaustion of the public lands was introduced by quotations from Thomas Carlyle and Lord Macaulay. Carlyle had said that American boasts of democracy were rubbish and that the laboring people were happy because of land. Macaulay had pointed to unoccupied lands and predicted that, when the American population was as dense as the British, American institutions would be brought to the test.[8] "What is the extent of these public lands whose occupation means so much?" queried Strong, and his answer was that "Even if the increase [in rate] should cease, the demand for 1884, steadily continued, would exhaust the supply in *twenty years.*"

In world history, Strong held that each race was representative of a great idea and that the Anglo-Saxon race stood for two related ideas, civil liberty and "pure *spiritual* Christianity"—Protestantism—and that it was the mission of the Anglo-Saxons, with the western United States as the seat of power, to evangelize the world.

> ...God, with infinite wisdom and skill, is training the Anglo-Saxon race for an hour sure to come in the world's future. Heretofore there has always been... a comparatively unoccupied land westward.... There are no more new worlds. The unoccupied arable lands of the earth are limited, and will soon be taken.... Then will the world enter upon a new stage of its history—*the final competition of races, for which the Anglo-Saxon is being schooled.*... Then this race... will spread itself over the earth.... Nothing can save the inferior race but a ready and pliant assimilation.... To this result no war of extermination is needful; the contest is not one of arms, but of vitality and of civilization.

For Strong, the idea of closed space, both American and world space, was not a calamity, but a process of completion, a fulfillment of destiny. Not only was God preparing the United States for this mission, but he argued that the backward races were being prepared to receive the impress of the civilization of the United States,—also, to want it. For Strong, civilization was "*the creating of more and higher wants,*" and opportunity would not vanish from the earth so long as higher wants were in store for humanity.

Fifteen years later Strong wrote another book using the same theme but oriented in the perspective of the Spanish-American War.[9] Again he opened his argument with the land question:

> Among the new conditions which confront the new century is the exhaustion of our arable public lands—a fact of both national and world significance.... The nation's energy has been chiefly concentrated on the industrial conquest of the continent, and the exhaustion of the arable public lands marks the practical completion of that conquest and constitutes the beginning of a new era in our industrial history.... Now a limit has been fixed, and our ever-increasing energy and wealth will find an ever-decreasing field for investment at home. This of course means that henceforth they will increasingly go abroad.

To the world it meant that civilization had circled the globe "and on the Pacific coast the European met the Asiatic. There are no more New Worlds; further west is the East." Furthermore, it meant increasing competition in the temperate zone, or "a movement toward the tropics; indeed, it means both, and both have already begun." As manufacturing productiveness increased, the home market was supplied, and it was necessary to find markets abroad.

> Industrial expansion is an absolute necessity to competitive manufactures. It is not the ultimate way out, of course, for it cannot continue always; there are limits to this earth of ours, and we shall not establish an interstellar commerce. But the "ultimate" is a long way off, and does not concern us in this discussion. Industrial expansion is a present necessity, and will continue to be until the nations learn to substitute industrial co-operation for industrial competition....
>
> In some directions there are no limits to possible progress. We can see no end to the changes which will come from new conquests of natural forces, but we easily foresee the end of the great movements which

[8] Strong cited "Lord Macaulay on American Institutions," *Harper's Magazine*, 54:460–462(1877), a series of letters by Macaulay to Henry S. Randall in 1857.

[9] Josiah Strong, *Expansion under New World-Conditions* (New York, 1900). The passages here quoted are on pages 19, 27, 30, 31, 102–103, 163–164, 185–186, 190–194, 202–203, 205–209, 214–218, 284, and 287.

have sprung from geographical discoveries. There are no more undiscovered countries. . . . The commercial supremacy of the Pacific will be final.

By 1900 Strong was not optimistic about the future competition among nations in closed space, without resort to force. He quoted with approval Professor Franklin H. Giddings's estimate of the battle of Manila Bay: " 'In my judgment it was the most important historical event since Charles Martel turned back the Moslems [732 A. D.], . . . because the great question of the twentieth century is whether the Anglo-Saxon or the Slav is to impress his civilization on the world.' "

Another quotation was taken from Émile de Laveleye: " 'A hundred years hence, leaving China out of the question, there will be two colossal powers in the world, beside which Germany, England, France, and Italy will be as pigmies—the United States and Russia.' " Strong added that these two nations face each other across the Pacific Ocean and that Sir Walter Raleigh had said: "Whosoever . . . commands the trade of the world commands the riches of the world and consequently the world itself."[10]

The similarities between the Slav and the Anglo-Saxon were listed: equal numbers, rapidity of geographical and numerical growth, powers of racial assimilation, genius for organization and government, and lastly, the unoccupied lands of "the North Temperate Zone, which is the zone of power, are divided between these two races. . . ."

In contrasting the two races, Strong asserted:

> The Anglo-Saxon is the supreme representative of civil and religious liberty; the Slav is the supreme representative of absolutism, both in state and church. Anglo-Saxon civilization is the one civilization in the history of the world based on the development of the individual. Russian civilization depends for its very existence on the supression of the individual. . . .
>
> In fundamental principles, in spirit, in ideals, and in methods they are diametrically opposed. They do not represent two different stages of development along the same lines. They spring from radically different conceptions, they aim at radically different ends; and the more fully they are developed, the more utter will be their unlikeness and the more inevitable their conflict.
>
> The stupendous struggle of the future will be not simply between two Titanic races, but between Eastern and Western civilizations. For the Russian (a unique type) is an Asiatic who by long contact with the West has been thoroughly vitalized, has absorbed Western learning, has mastered Western military science, and who now, without loosening his hold on Europe, is returning to Asia, there to work out his destiny. . . .
>
> Russia has a religious mission to control Asia; and the genius of the race and its geographical position unite to stimulate its purpose of eastward and southward expansion. Russia can wait, but never vacillates in her supreme purpose. That purpose runs through the generations as a thread runs through a string of beads. Her advance on China is a new ice age—a slow, resistless, paralyzing movement from the north. Already has she gained Manchuria, and now controls nearly one-half of the Asiatic coast-line of the Pacific, the whole of which is her aim. . . .
>
> Is the Anglo-Saxon or the Slav to command the Pacific and therefore the world's future? . . . .
>
> Unless prevented by Russia, England and America will give to China the blessings of European civilization, the triumph of which represents the liberation of the individual, not only politically, but religiously and intellectually. Bring the East thoroughly under the influence of the West, and it would be impregnated with a new life. Asia would gain political and religious regeneration; while the world would gain a new literature, a new art, and a new member of the sisterhood of nations.
>
> If Russia gains control, Asia will remain Asiatic for centuries to come, China's vast resources will become the resources of the Slav, her millions his millions, with their power multiplied many fold by his military skill and his genius for organization. . . .
>
> . . . Surely [the Pacific ocean] this New Mediterranean, which in the twentieth century is to be the center of the world's population and the seat of its power, is to be an Anglo-Saxon sea, provided only we place on it an adequate navy. . . . [A sea] wall of defense . . . cannot be mined or breached, and . . . never becomes antiquated. . . .
>
> Now it is a significant fact that the sea stands guard over all six of the Anglo-Saxon families; and this sea-wall exempts them from the necessity of keeping great standing armies, thus saving them from the vampire of militarism, which curses the great Continental powers. . . .
>
> . . . armies have often proved dangerous to liberty, navies have never fallen under that suspicion. In all the world's history . . . no admiral has ever seized civil power. Navies may defend a land; they cannot conquer it. . . . The Anglo-Saxon families [four of the six face the Pacific] are so placed in the world that they can defend themselves, command the Pacific, and accomplish their mission in behalf of civilization by means of sea power. . . .

[10] It is possible, if not probable, that the form of Mackinder's famous statement of the heartland formula was derived from Raleigh's sentence relative to seapower. Raleigh anticipated the Columbian age of seapower; Mackinder adapted it to a landsman's view in anticipation of the air age.

> . . . seeing its [world's] best hopes for liberty at stake in the far Pacific, [God] planned a colonization scheme for the ages which should place that ocean under the control of the race which is the special guardian of liberty.

Strong was conscious of the world revolution in communications and evaluated discriminatingly the significance of the outlook induced by these technological changes:

> When communication beyond the edge of the village was only semi-occasional, the village was the little world of its inhabitants. . . .
>
> With the advent of the railway, the telegraph, and the press, the narrow horizon was enlarged; national happenings became the subject of daily thought. . . .
>
> . . . But the submarine cable and the triple-expansion marine engine have reduced the world to a neighborhood. . . . Thus our horizon has been enlarged to the measure of a great circle of the earth. . . .
>
> . . . Life loves harmonies and resemblances, but these imply differences. Uniformity means stagnation. . . .
>
> Life produces variety; and it can rise to higher forms only as it develops differences. . . .
>
> A world life, then, as it is time's last offspring, ought to be the noblest, and therefore the most complex, possible only when the greatest differentiation has taken place.

The new status of the individual was stressed in the last chapter. A distinction between independence and freedom was explained as Strong saw the problem—a significant consequence of the closed geographical system and the higher civilization:

> To be independent is to be exempt from reliance on others and from the rule of others. To be free is not to be exempt from law, but from arbitrary or despotic law. . . .
>
> The progress of civilization involves the increase of organization, industrial, social, and political, and, therefore, necessitates an ever-decreasing independence, while it makes possible an ever-increasing freedom.

Alfred T. Mahan

The name of Alfred T. Mahan (1840–1914) is associated primarily with the idea, announced in 1890, of the influence of sea power as a determinant in history.[11] Because his contribution was founded on the concept of sea power as distinguished from the narrower one of naval power, its implications were much broader than mere military policy. The naval aspect included the concentration of power, command of the sea, fleet organization, and action as a single fighting unit. Such naval organization required overseas bases with the whole supported by production, shipping, and colonies. The effectiveness of sea power was further dependent upon geographical position and, as applied to the United States, required the possession of outlying positions off the Pacific and Gulf coasts as a first line of defense and a canal across the Isthmus to connect the Caribbean Sea with the Pacific Ocean. When sea power was dependent upon sails, the problems had been less difficult. A ship was relatively self-sufficient for long periods of time. But in the age when steam, steel, and science were being applied fully to naval warfare for the first time, all this was changed. Fleets became dependent upon bases for fuel, supplies, and repairs—all of which emphasized the need for overseas bases and communication to service the fleets in order to maintain the command of the sea. Of the essentials of sea power in 1890, the United States possessed only productive capacity based upon the development of the interior during the nineteenth century. Attempts to create shipping and colonies were already in evidence. The United States was looking outward but had not yet gone far toward translating ideas into action and concrete results.[12]

By 1895 Mahan was stressing the point that "More and more civilized man is needing and seeking ground to occupy, room over which to expand and in which to live. Like all natural forces, the impulse takes the direction of least resistance, . . . the incompetent race or system will go down. . . . Because so much of the world still remains in the possession of [backward peoples] . . . [and the] energies of civilized states . . . are finding lack of openings and scantness of livelihood at home, . . . there now obtains a condition of aggressive restlessness with which all have to reckon."[13]

Two years later Mahan was making a highly significant interpretation of the meaning of the nineteenth century to the modern world. He observed that practically all the world was occupied politically by the early nineteenth century.

[11] Alfred T. Mahan, *The Influence of Sea Power upon History, 1660–1783*(Boston, 1890).

[12] A. T. Mahan, "The United States Looking Outward," *Atlantic Monthly*, 66:816–824(1890); reprinted in Mahan's collected essays, *The Interest of America in Sea Power, Present and Future*, 3–27(Boston, 1897).

[13] A. T. Mahan, "The Future in Relation to American Naval Power," *Harper's Magazine*, 91:767–775(1895); reprinted in Mahan, *The Interest of America in Sea Power*, 137–172.

> The great work of the nineteenth century, . . . has been in the recognition and study of the forces of nature, and the application of them to the purposes of mechanical and physical advance. The means thus placed in men's hands, . . . were devoted necessarily, first, to the development of the resources of each country. Everywhere there was a fresh field; for hitherto it had been nowhere possible to man fully to utilize the gifts of nature. Energies everywhere turned inward, for there, in every region, was more than enough to do. Naturally, therefore, such a period has been in the main one of peace. . . . during which men have been occupied in revolutionizing the face of their own countries by means of the new powers at their disposal.
>
> All such phases pass, however, as does every human thing. Increase of production—the idol of the economist—sought fresh markets, as might have been predicted.

To Mahan the twentieth century would settle the issue of "whether Eastern [China, India and Japan] or Western civilization is to dominate throughout the earth and to control its future." He held that American civilization was only an extension of European and "on the Pacific coast . . . are found the outposts, the exposed pioneers of European civilization. . . ." The Caribbean area, the Isthmian canal, and the Hawaiian Islands were the vital strategic nerve centers of the European civilization.[14]

In the main, Mahan's early ideas, political and economic, were reflections of the current trends of neomercantilism and imperialism, but his later views contained much that was more peculiarly his own. The essay of 1895 developed the concept of closed space, the necessity for "room over which to expand and in which to live," and the idea of competition between higher and backward civilizations. These were the conventional views although the language was an anticipation of the phrasing of twentieth-century geopolitics. The essay of 1897 went further and stressed the ultimate struggle for survival and supremacy as between the Oriental culture of Eastern Asia and Christian civilization based upon Christianity. Mahan's interpretation of the nineteenth century was more original, however, and is of particular interest in contrast with Turner's. It was more comprehensive in scope, and for him the key that unlocked opportunity was science and its application to the full utilization for the first time of the gifts of nature. He insisted that "everywhere there was a fresh field." In the oldest countries of Europe the new mechanization provided "more than enough to do" for men in "revolutionizing the face of their own countries." For him it was not the closing of space in the conventional sense of space geography that precipitated the imperialistic impulse, or the struggle for survival of European over Oriental civilization as Mahan saw it, but surplus production in the Old World and the expansion of Old World energies into a similar development of the "gifts of nature," elsewhere. To Mahan closed-surface geography did not mean a closed world, because the nineteenth-century science and its application through machines was being transferred in the twentieth century to new regions for a continuation of the process there. It is evident, however, that as a military man, Mahan's preoccupation was more with the state than with the freedom of the individual as such.

[14] A. T. Mahan, "A Twentieth-Century Outlook," *Harper's Magazine*, 95:521–533(1897); reprinted in Mahan, *The Interest of America in Sea Power*, 217–268.

Sir William Crookes

The historian, the geographer, the clergyman, and the naval historian and strategist have passed in review, and each in turn has speculated on the different aspects of the phenomenon of closed space. Not even the laboratory scientist was immune to the influence of the idea. In his presidential address before the British Association for the Advancement of Science in September 1898, Sir William Crookes (1832–1919) warned that the end of new wheat land meant a shortage of bread for the world early in the twentieth century unless new sources of nitrogen could be devised.[15] Although stressing the end of new land available for wheat, a closed-surface geography, Crookes was not thinking in terms of a closed world. He sought in science a substitute for new land. With respect to the nitrogen supply, his confidence in the chemical profession was not misplaced. In the Crookes sense it is evident that a closed world order could exist only to those who were thinking in terms of space geography.

Evaluation

In evaluating the influence of significant thinkers of any period, it is not enough to study their writ-

[15] Sir William Crookes, *The Wheat Problem* (London and New York, 1900). This book version of the address includes a review of the controversy and a reply as well as some revision of the text. See also E. E. Fournier d'Albe, *The Life of Sir William Crookes* (London, 1923).

ings; it is equally important to examine the problem of how others used or misused their inspiration. The case of Josiah Strong is an example of how quickly and completely one of the important molders of public opinion of his generation could be forgotten as a personality. Possibly his interest was scattered over too many subjects instead of being concentrated sharply upon one simple idea. In many respects, nevertheless, his influence continues without specific identification with his name. Crookes, the chemist, as a prophet of opportunity through science, has had many rivals for popular favor, and in the multiplicity of voices neither he nor any other single spokesman for science has come to occupy a commanding position. The point of view, however, is widely held. Mahan is remembered primarily for his idea of sea power, and in that his work was too well done. Artificially deprived of a chance at sea power, Germany, between the two world wars, arrived first at a measure of understanding of the obsolescence of that form of military might and turned to air power. Once the world appreciated the significance of air power in warfare, the Mahan maxim of command of the sea was transferred to command of the air. Mackinder was thinking primarily in terms of future policy, using history and geography as the basis of planning for a world operating in closed space. In Great Britain, where his ideas were intended as a warning to his own people, he was largely ignored, and instead it was the enemy that recognized his ideas and in ruthless reinterpretation used them in the attempt to overthrow the very democratic ideals Mackinder was hoping to protect. The Germans had done much the same thing a generation earlier with Mahan's idea of sea power.

Turner himself gave little attention directly to planning the future, but during the second quarter of the twentieth century, the Turner idea was seized upon by others to an increasing extent for that purpose, especially by the adherents of the New Deal after 1932.[16] Turner's essay of 1910 had asserted that the national government was being used as a substitute for the frontier, but that essay must be considered in relation to its background, which was the Progressive movement prior to World War I. In that perspective it cannot be interpreted as an endorsement of such totalitarian tendencies as the New Deal. He was not thinking of changing or discarding democracy and individualism but only of discovering the ways and means of preserving their traditional forms as practiced in an era associated with his idea of the frontier as a historical determinant. Turner died on March 14, 1932. What he would have said about the New Deal or about the issue of totalitarianism is speculation, but there is nothing in his published writings to indicate that he had lost faith in nationalism, democracy, and the individual. Those who have used the Turner tradition as a justification for totalitarian planning were not faithful to his teachings as history but were generalizing freely upon them, creating a Turner legend to suit their particular purpose. In different language, they were using the Turner prestige as a peg of respectability upon which to hang their own ideas, foreign to the American system, hoping that thereby those ideas might be made acceptable in the reflected light of Turner, the American historical scholar and the idol of his generation.

Some historians have come to challenge the validity of many of the tenets of the Turner school of historical interpretation, and the present author is one of them. As a product of his time and of the Middle Western environment, Turner was expressing both himself and his generation; he was teaching history in terms of unconscious propaganda. His themes were nationalism, democracy, and individualism, with the frontier as his instrument of instruction. Acceptance by his contemporaries, plus fifty years of worship at the shrine of the significance of the frontier in American history, are irrefutable evidence that he had given a full and accurate expression of the genius of his own generation of Americans, but it is not proof of the soundness and adequacy of his interpretation of American history. His was the first generation to grow up after the American Civil War, and it was their task to write into American history the results of that second American revolution in terms of a war of national unification.[17]

[16] Everett E. Edwards, "References on the Significance of the Frontier in American History," United States Department of Agriculture Library, *Bibliographical Contributions 25*(ed. 1, 1935; ed. 2, 1939). In this bibliography the simple act of listing and describing the contents of the several titles of articles and books cannot but impress the investigator with the extent of the use New Deal supporters made of the Turner tradition.

[17] Cf. James C. Malin, *An Interpretation of Recent American History*(New York, 1926). In this book the author insisted on treating the period 1865 to about

Irrespective of the validity of Turner's interpretation of the significance of the frontier, or of idealization on the part of his erstwhile followers, the Turner tradition wielded a tremendous influence and as such continues as a major historical force to be reckoned with in contemporary American life. Only in the case of George Bancroft has an American historian exercised an influence at all comparable in importance with that of Turner, and his was of a different sort. As in the case of Mahan, Turner had done his work more thoroughly than he knew, and his frontier hypothesis, like a heroic legend, instead of serving as a stimulus to originality, became a closed circle of imitative routine, a voice of authority, in the persons of his disciples, to confound all non-conformists. This general statement is not to be applied to all of Turner's followers, however, as there was a virile minority whose personal loyalty is unquestioned, who deprecate the misuse of the Turner tradition, who appreciate the creative spirit it once inspired in Turner's hands, but who realize its limitations and inadequacy as a generalized interpretation of American history. It represented both a stage in the development of Turner's thought and in the evolution of American historiography.

To be continued

1887 as a unit, with the culmination of national unification as the central theme. On some points there has been reason to modify or enlarge views then expressed, but the significance of this main point is only reinforced by the passage of time.

LAND TENURE AND TENANCY IN THE HUDSON VALLEY, 1790–1860

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The system of landholding and the institution of leasehold tenure which made the land history of the Hudson Valley counties so distinctive, if not unique, in American history received its death blow in the period between the Revolution and the Civil War.[1] This land system was characterized by large manors and estates owned by a closely knit and politically powerful aristocracy. The landed proprietors adopted the policy of leasing their lands on conditions often suggestive of feudal obligations and tenure. The tenants resented their economic and political subservience and tried on several occasions to free themselves of landlord domination. Throughout the 1750s and 1760s, they refused to pay rent and attacked the land titles of the landlords. During the 1790s and again in 1812–1813, tenant farmers in Columbia County waged a fierce antirent war. Finally, in 1839, the death of Stephen Van Rensselaer gave the signal for a renewal of the struggle which was only to end in the virtual destruction of the leasehold system in the Hudson Valley counties.

Ironically enough, this century-old agrarian struggle, which surpassed in duration and equalled in intensity any other conflict between landlord and tenant in American history, was brought to a successful conclusion only a few years before the Census of 1880 revealed to a startled public the ominous fact that one-fourth of all American farmers were tenants. Admittedly there are important differences both in legal status, personal outlook, and economic position between the leaseholder on Livingston Manor in 1840 and the tenant farmer of Iowa one hundred years later. However, a closer examination reveals that fundamentally the problems besetting both farmers were similar in character. Each had to face insecurity of tenure; each had been discouraged from making any permanent improvements except in unusual cases. Furthermore, the tenant farmer of both centuries had to carry the burden of rent in a time of rapid agricultural change. Between 1790 and 1860, the farmers of the northeastern part of the United States no less than contemporary farmers had to make many painful readjustments. The shift from a predominantly self-sufficient economy to one primarily dependent on a market was not accomplished without hardship.[2] Certainly no other group of farmers was more exposed to the revolutionary forces of the growing home market and of western competition than the farmers of the Hudson Valley counties. As a result, the rural economy of this region reveals a bewildering variety of individual and local adjustments. Many farmers were unable to make the necessary adjustments and migrated to the west or drifted to the cities. The specter of rural decline stalked the hill towns of eastern New York as well as New England long before the hooded Indians were roaming the countryside shouting, "Down with the rent." The various antirent outbreaks thus became an expression of the prevailing agrarian unrest.

In general the counties along the lower Hudson Valley boasted a society in which the small independent farmer predominated.[3] Farther upstream in Albany, Rensselaer, and Columbia counties the old leasehold system had taken firmer root. Here was located a large share of the 1,800,000 acres which Governor John Young estimated were still under lease as late as 1848.[4] Here were the estates of the Van Rensselaers and the Livingstons. Of course, it must be remembered that independent freeholders were numerically in the majority even in those counties where the largest manors were located.

Westchester County had become a well-settled community of independent farmers by 1790. The

[1] This paper was presented at the session of the Agricultural History Society with the American Historical Association in New York City on Dec. 28, 1943.

[2] David M. Ellis, An Agrarian History of Eastern New York, 1790–1850, p. 105–352 (MS, Thesis, Cornell University, Ithaca, 1942). For an interesting article covering the period in New England, see Percy W. Bidwell, "The Agricultural Revolution in New England," *American Historical Review*, 26:683–702 (1921).

[3] Ellis, Agrarian History, 35–105, takes up the land pattern in considerable detail.

[4] Charles Z. Lincoln, ed., *Messages from the Governors . . . , 1683 to 1906*, 4:408 (Albany, 1909).

destruction wrought by marching armies and laws confiscating Tory estates and abolishing manors merely hastened the trend to freehold tenure that began before the Revolution.[5] Moreover, the landlords were usually willing to sell the fee simple "whenever it was applied for." The great manor of Philipsborough (156,000 acres) was confiscated by the state government because Colonel Frederick Philipse remained loyal to the British Crown. Despite the speculation in this estate by realtors, the land gradually found its way into the possession of small owners.[6]

In Dutchess and Putnam counties farm tenancy persisted tenaciously although there was a strong drift toward freeholds. By 1790 the large patents had been distributed among the owners. Some sold their lands; others leased their farms on various terms. The Van Cortlandts and Madam Brett sold outright their lots in the Rombout patent while the Verplanck family insisted on a policy of leasing the land. George Clarke, Jr., scion of a prominent official in the colonial government, leased his lands in Dutchess County as well as those he owned in the Mohawk Valley and in Otsego County. That portion (approximately 50,000 acres) of the Highland Patent of Frederick Philipse which had passed to Roger Morris and his wife in 1754 was confiscated by the state government.[7] Between 1782 and 1784, this property was sold chiefly to the former tenants. Such action merely dramatized the gradual shift from tenancy to ownership in Dutchess and Putnam counties. Probably the best evidence of the extent of this shift was the advanced state of agriculture in Dutchess County. During the antirent agitation, the leaders of the movement often compared the agricultural backwardness of Columbia County with the advanced methods in Dutchess County and invariably fastened the blame on the tenancy system.[8]

Across the Hudson in Rockland, Orange, and Ulster counties, the small independent farmers were the most numerous and politically the dominant social class. Governor George Clinton and Jeffersonian democracy drew much of their political strength from the yeomen of this area. Originally large patents had covered most of the land but fortunately most of the patents had been broken up and freely sold during the eighteenth century. The annulment by Governor Bellomont of the notorious Evans patent (350,000 acres), paved the way for the granting of relatively small tracts averaging 2,000 acres. According to a local historian, this repeal saved all of Ulster County below New Paltz and east of mountains as well as a good share of Orange County from the "blighting effects" of landlordism.[9] The system of three-life leases did prevail, however, in the Ulster towns of Shandaken, Shawangunk, and Woodstock, all of which lay within the Great Hardenburgh Patent.

For over a century fierce agrarian revolts marred the history of Columbia County where the leasehold system was particularly burdensome, but the Livingstons and other landed families put down every uprising until the antirent wars of the 1840s forced them to dispose of their holdings. Livingston Manor was the estate of the famous family which contributed so many influential leaders to the political life of the colony, state, and nation. Embracing some 160,000 acres in all, it stretched across the lower third of Columbia County. The Claverack lands of the Van Rensselaer family adjoined Livingston Manor to the north. Originally this tract contained some 250,000 acres, but subsequent patents such as the Jan von Hoesen purchase and Kinderhook patent were carved out of it.[10] Unfortunately the boundaries were so vaguely drawn that endless litigation between rival claimants resulted. These law suits prevented orderly development and added to the feeling of insecurity among the tenants.

The largest manor of all was Rensselaerswyck with over three thousand tenants. Embracing hundreds of thousands of acres on both sides of the Hudson River, this manor was indeed a princely domain. The family leased 233,900 acres in Albany County and 202,100 acres in Rensselaer

[5] E. Wilder Spaulding, *New York in the Critical Period, 1783–1789*, p. 66 (New York, 1932).

[6] J. Thomas Scharf, *History of Westchester County, New York*, 1:177 (Philadelphia, 1886); Harry B. Yoshpe, *The Disposition of Loyalist Estates in the Southern Part of New York State*, 116 (New York, 1939).

[7] For a good account of these lands in Putnam County, see Kenneth W. Porter, *John Jacob Astor, Business Man*, 2:876–892 (Cambridge, Mass., 1931).

[8] Timothy Dwight, *Travels in New England and New York*, 3:426 (London, 1823); *Anti-Renter*, Jan. 31, 1846; *Albany Freeholder*, Feb. 11, 1846.

[9] Marius Schoonmaker, *History of Kingston*, 100 (New York, 1888). See Ellis, Agrarian History, 51–54, for more details.

[10] S. G. Nissenson, *The Patroon's Domain*, 305 (New York, 1937).

County.[11] It was not until Stephen Van Rensselaer went to live with his bride, Margaret Schuyler, at the manor house at Watervliet in 1785 that large areas of the manor were surveyed and settled. The young patroon promptly pushed the settlement of his lands, offering perpetual leases to his new leaseholders. He required no down payment and offered free rent for seven years. In 1789 he openly challenged the people to see if "any hired lands" in this or any state "are let on as favorable terms to tenants as my lands are."[12] He was apparently justified in this boast for settlers took up farms rapidly. Between 1786 and 1800, most of the leases on the manor east of the river were signed, and the first rents on the west manor were collected in 1793.[13]

Antirent orators later charged that the agents of the patroon had tricked the settlers into signing the leases. After the seven years of free rent, the tenants were invited to come to the manor office and sign a lease. According to the antirenters the settlers found the terms in the lease much stiffer than the original verbal agreements. Faced with the loss of their improvements, the objectors usually signed as did the illiterate Dutch farmers who did not understand what they were signing. It would now be difficult to affirm or deny these charges.[14] However, a study of the leases shows that the Van Rensselaer lease of 1790 was substantially the same as those contracted during the early part of the eighteenth century.[15]

The proprietors of the land patents in Washington and Saratoga counties north of Van Rensselaer Manor were generally willing to sell the land to settlers. The famous Schuyler family owned thousands of acres in the Saratoga patent which included much of the rich bottom land along the upper Hudson. In 1776 General Philip Schuyler told Charles Carroll of Maryland that it was the custom of the great proprietors to lease their farms for three lives, reserving sometimes a fourth but more often a tenth of all produce.[16] An examination of his rent ledger shows that he followed this policy. More than one hundred and twenty tenants were listed for Saratoga County and eighty more on other tracts.[17] Most of the proprietors in Washington County east of the Hudson sold the land in fee. Perhaps the success of the Green Mountain Yankees in fighting land jobbers from New York warned them that any attempt to keep control of their lands might be challenged by the aggressive "levelers" of New England.

It may be noted in contrast that few landholders outside the Hudson Valley adopted the policy of leasing their lands. It was not from lack of large holdings since several million acres of land in northern, central, and western New York passed into the hands of speculators and landholders. For example, Alexander Macomb acquired 3,635,000 acres in the Adirondack region whereas Massachusetts sold its right to the land west of Seneca Lake to Phelps and Gorham whose holdings were eventually acquired by Robert Morris, the Holland Land Company, and other speculative groups. The owners of these tracts generally followed the advice of William Cooper, father of the novelist and himself one of the largest and ablest land promoters of his generation. Cooper urged landholders to sell and not to lease although he did not exclude the perpetual lease as a method of land disposal. His procedure was to give the settler a warrantee deed and a credit of ten years at the end of which the settler would pay off the mortgage on the property.[18]

Some attempts to develop large tracts on the leasehold basis outside the Hudson Valley were made by James Duane, prominent patriot of Schenectady County; Baron Steuben and General Floyd in Oneida County; George Clarke with estates in Oneida, Otsego, and Montgomery counties; the Livingston and Goldsbrow Banyar families with numerous holdings throughout the eastern New York area; the various patentees of the Great Hardenburgh Patent such as the Verplancks, John Hunter, Henry Overing, the

[11] *People* v. *Van Rensselaer*, 9 N. Y., 301; New York Senate, *Documents*, v. 3, no. 92 (1846).

[12] Broadside, Apr. 27, 1789, no. 8016, New York State Library.

[13] *People* v. *Van Rensselaer*, 9 N. Y., 301. In 1911 the original leases for the west manor were destroyed in the Capitol fire.

[14] *Albany Freeholder*, June 25, Dec. 24, 1845, Feb. 25, 1846.

[15] See Irving Mark, *Agrarian Conflicts in Colonial New York, 1711–1775*, p. 62–73 (New York, 1940); Nissenson, *Patroon's Domain*, 52–53.

[16] *Journal of Charles Carroll of Carrollton during his Visit to Canada in 1776*, p. 45 (Baltimore, 1845).

[17] Ledger of Rents at Saratoga, 1760–1805, Schuyler Papers, New York Public Library.

[18] William Cooper held over 750,000 acres. See James Cooper, *The Legends and Traditions of a Northern County*, 234 (New York, 1921). See also William Cooper, *Guide in the Wilderness*, 1–10 (New York, 1810).

Hardenburghs, and James Desbrousses; and the Wadsworth family in the Genesee Valley.[19]

The leases under which the tenants held land were by no means uniform.[20] Most leases were in effect freehold estates which were subject to a yearly rent and other limitations. The "durable lease" was the most widely used form. Stephen Van Rensselaer adopted this method of conveyance almost exclusively. His tenants, or more accurately, the freeholders on Van Rensselaer Manor had to pay him a perpetual rent of between 10 to 14 bushels of winter wheat per 100 acres, 4 fat fowl, and a day's work with a team of horses or oxen. On the other hand the tenants on Livingston Manor generally held their freeholds for two lives. Upon the death of the second person named as lessee, the farm reverted to the Livingston family. General Philip Schuyler leased his farms in Saratoga County for three lives. Obviously the Van Rensselaer tenants enjoyed a position far superior to the Livingston and Schuyler tenants whose farms became the property of the landlords after the persons named in the lease died.

Landed proprietors frequently retained additional rights in the land. Most leases provided for fines on alienation, that is, the seller had to pay to the landlord one-third, one-fourth, or one-tenth of the sales price when he sold out his interest in the farm. The Rensselaerswyck leases provided that the tenant should pay one-fourth of the money to the patroon, or in some cases, an extra year's rent. The "quarter-sales" not only permitted the landlord to keep out undesirable tenants but also provided considerable revenue. This restriction aroused much resentment since it was considered by many to be an invalid restraint on alienation, a view which the courts finally took. In addition, the landlord sometimes reserved all rights to mines and mill sites. Failure to meet any obligations gave the landlord the right to distrain the property of the tenant.

Any answer to the question of how much burden the tenant farmers had to carry must consider several factors. The original tenant usually obtained his land without any down payment. In fact, he enjoyed a free period ranging from four to seven years during which he paid no rent. Thereafter he paid an annual rent either in kind or in money. This rent varied according to the location, fertility, and date of the original leasing. Few leases, however, called for less than 10 or more than 20 bushels of wheat per 100 acres.

Wheat rents naturally fluctuated with the changing price of that commodity. Whatever flexibility or convenience the wheat payment may have possessed during the early years was largely nullified by declining yields and the virtual collapse of commercial wheat cultivation throughout eastern New York during the 1830s. Sometimes the wheat payments were commuted at a fixed sum per bushel. Thus the original Livingston leases were commuted so that the tenant paid $18 for each 100 acres of land he held.

The rent varied from tract to tract and from year to year. Considering 15 bushels of wheat per 100 acres as an average payment, the rent on a 100-acre farm on January 1, 1837 when wheat was 18 shillings a bushel would have been $33.75. The same farm in 1840 when wheat was worth only 9 shillings would have paid only $16.88. During the decade following 1830, the average price of wheat, according to the Van Rensselaer records, was $1.38.[21] The rent for a farm of 100 acres would thus amount to $20.63; for a 160-acre farm, $32.38. It must be noted that these figures do not include such items as the 4 fowl and day's service required in the Van Rensselaer leases and such charges as quarter-sales found in many leases.

Using either the estimate of the agent of the Van Rensselaer family that the average rent of the farms in the four western towns of Albany County had been $31.16 during the thirty years prior to 1846, or the figure of $32.00 used by Horace Greeley in his description of a typical tenant, the amount should not be dismissed as insignificant.[22] The payment of this sum represented a substantial part of the cash income of the tenant farmers.

This burden was particularly heavy on the farmers of the hill towns, and it is significant that most of the antirent disturbances took place in the isolated hill country such as the Helderberg townships in western Albany County. The hill farmers found it impossible to raise wheat on the exhausted soils. Sheep raising offered a way out for the

[19] For details concerning the land policies of these landed families, see Ellis, Agrarian History, 35–104.

[20] For an analysis of the leasehold, see Mark, *Agrarian Conflicts*, 62–73. See also Spaulding, *New York in the Critical Period*, 58–63. For typical leases, see the Tilden report in New York Assembly, *Document 156* (1846). See also the Van Rensselaer leases in the New York State Library at Albany.

[21] New York Assembly, *Document 156*, p. 51 ff. (1846).

[22] *Ibid.*; New York *Weekly Tribune*, Sept. 8, 1845.

tenants during the 1830s, but declining wool prices after 1838 and western competition forced out the marginal producers within the next decade. Possessing little capital to buy improved livestock, lacking incentive to make or buy permanent improvements such as dairy barns, spring houses, and other dairy equipment, and usually located away from the main routes of transportation, the tenant farmer found it most difficult to adjust himself to the conditions of commercial agriculture. When the great majority of American farmers were mining the soil and ignoring the principles of sound husbandry, it is not to be expected that tenants and particularly those whose leases were soon to run out would follow improved techniques or try to restore the fertility of their land. Instead they fell prey to the shiftlessness associated with the tenancy system. As a result the houses and barns of tenants were "exceedingly dilapitated," their fields were exhausted, and their husbandry was uniformly predatory.

Horace Greeley painted a graphic picture of the typical tenant of 1845. The value of his yearly produce did not reach $300 of which two-thirds was directly consumed. What little cash he had was "mortgaged to storekeepers" before the harvest arrived. Half of the 160 acres under lease often remained a wilderness because it was not worth clearing. At least half of the cleared areas was "miserable bush pasture." The corn and rye yielded less than 10 bushels an acre. In addition, he raised some potatoes and kept a few poor cattle. Undoubtedly he supplemented his income by stealing timber and peeling bark from the lands of nonresidents.[23]

The landed families experienced many difficulties in their effort to establish and maintain an aristocratic land system similar to the great estates of England. Good tenants were hard to get and difficult to keep. The average American regarded tenancy as degrading. He preferred to buy the fee outright. Furthermore, if landholders made their terms too onerous, the tenant would move to the cheap lands in the west. A letter of Colonel William North, son-in-law of James Duane, to Benjamin Walker, heir to Baron Steuben's estate in Oneida County, about 1800 reveals much of these troubles.

> This letting farms on shares and indeed for rent in money is a miserable business. . . .Sell—money enough down to pay a years rent and credit for the rest —They will then work the farm as for themselves and make it better.[24]

Practically every landlord had trouble when he tried to collect the rent. Sometimes payments were accepted in kind. Not infrequently the tenant had to beg his landlord to grant an extension. The leniency of some landlords, sometimes arising from paternalism as in the case of Stephen Van Rensselaer and sometimes stemming from the realization that a tenant on the farm protected it from the depredations of neighbors and from being overrun by underbrush, only aggravated the situation by postponing the day of reckoning and encouraging the tendency to shiftlessness.

Opposition to tenancy was endemic in the Hudson Valley counties between 1790 and 1860. In 1791 the tenants of Columbia County on both the Livingston and Van Rensselaer holdings resisted with force officers attempting to collect the rent. Seventeen men disguised as Indians interrupted the auction proceedings at Nobletown. During the disturbance, the sheriff was killed,[25] but the slaying did not put an end to the agitation. In 1795 over two hundred tenants petitioned the legislature, demanding an investigation of the Livingston title. The Assembly turned a deaf ear to their appeal. The tenants continued to obstruct the collection of rents and to intimidate potential purchasers of farms. In 1798 Governor John Jay had to ask for special approval of the legislature to put down the disorders.[26] As a result of this unrest many tenants surrendered their leases on Livingston Manor between 1800 and 1810.

In 1811 the old antagonism between landlord and tenant flared up once again. Petitions to the legislature opened up the question of land titles and the laws regulating tenures. The Assembly and the Senate by concurrent resolution requested three noted lawyers to investigate possible remedies for evils arising from leasehold tenures. Despite their recommendation that a ban be placed on the granting of new leases and the right to forfeit old leases, a bill designed to carry these reforms failed to pass the Senate.[27] The landed

[23] *Ibid.*

[24] May 16 (18—), no. 3737, New York State Library. See also letters of May 12, 1799 and Dec. 3, 1801.

[25] *Albany Gazette*, Oct. 31, 1791; Ellis, Agrarian History, 59–60.

[26] Lincoln, *Messages from the Governors*, 2:411.

[27] New York Assembly, 35 sess. (1812), *Journal*, 110–111. For further details, see Ellis, Agrarian History, 243 ff.

families exerted great political influence which was only partially diminished by the adoption of manhood suffrage in the constitutional convention of 1821.

In the meantime Martin Van Buren was stirring up the smouldering embers of antirentism in Columbia County. The fact that Thomas Emmett, famous Irish leader and Attorney General of New York State was likewise investigating titles in dispute added fuel to the fire. He was soon replaced by Abraham Van Vechten who was widely known as a "landlord's lawyer." The antirenters of another generation darkly intimated that landlord influence had caused the dismissal.[28] The incendiary speeches of Van Buren in the courts and on the platform led to the usual disorders. Tenants refused to pay the rent and officers were prevented from collecting it. The landed proprietors were able, however, to beat off this attack with the same success as before. Nevertheless, the anachronism of a landed aristocracy living in semifeudal splendor among their tenants in an age in which democratic fervor elevated the frontier hero, Andrew Jackson, to the White House became more and more unbearable.

The attempt of Stephen Van Rensselaer's heirs to collect approximately $400,000 in back rents reopened the antirent controversy in 1839. The flame of revolt lighted by the Van Renssalaer tenants in the Helderberg townships late in that year did not die out for several decades. By 1844 it had spread to much of the leasehold region south of Albany. The struggle took much the same pattern as previous uprisings. Sheriffs were assaulted; disguised riders ranged through the countryside preventing the collection of rents; and the titles of the landlords were challenged in the courts. There was, however, one crucial difference. The antirenters of the 1840s were far better organized than their predecessors. They formed town, county, and state committees. They published their own newspapers, held periodic conventions, and elected their own political spokesmen. The leaseholders likewise outgeneraled the landholders in the field of politics where the latter had long exercised a dominant influence. According to a correspondent of the New York *Weekly Tribune*, the success of the candidates endorsed by the antirenters in the election of 1845 caused the politicians to show "a wonderful anxiety" to "give the Anti-Renters all they ask."[29] As a result the legislature passed several acts taxing ground rents and abolishing distress.

Shortly thereafter the legislature called a constitutional convention to consider certain political reforms. The convention likewise took a decisive stand on the leasehold. It declared that all lands in the state were allodial. No fines, quarter-sales, or restraints on alienation in any lease in the future would be valid. The convention forbade any future lease of agricultural land for a longer period than twelve years in which any rent was reserved. Of course, these provisions did nothing to relieve tenants chafing under existing leases. It did, however, represent a moral victory for the tenants.

Between 1846 and 1851, the antirenters exerted a great deal of influence in the election of the governors and the legislature.[30] The question naturally arises: what benefits did tenant farmers receive as a result of their victories at the polls? First of all, the election of friendly sheriffs and local officials virtually paralyzed the efforts of the landlords to collect rents. This fact coupled with the extralegal acts of the antirent associations was extremely important in speeding up the process whereby hard-pressed and disgusted landlords agreed to sell the fee at a low valuation. Second, the creation of a small but determined bloc in both houses of the legislature kept the grievances of the tenants continually before the eyes of the legislators and threatened the adoption of laws designed to challenge the titles of the landlords. The election of their favorite, John Young, as governor not only secured the pardon of antirent prisoners but also led to an investigation of land titles by the attorney general. The courts eventually upheld the argument of landlords that the statute of limitations prevented any questioning of the original titles, but the courts also outlawed the quarter-sales and declared that holders of perpetual leases were in reality freeholders.[31]

The struggle in the courts was the last stand of the landholders. Already by 1845 they had reconciled themselves to the gradual and eventual destruction of the leasehold. Thereafter their main effort was to salvage as much from their interests as possible. Victories in the court chambers could

[28] *Albany Freeholder*, Nov. 24, 1847; Jan. 5, 1848.

[29] New York *Weekly Tribune*, Jan. 19, 1846.

[30] Ellis, Agrarian History, 427–438.

[31] See *DePeyster* v. *Michael*, 6 N. Y. 467; *People* v. *Van Rensselaer*, 9 N. Y. 317.

not counterbalance the impossibility of collecting rents, the attitude of hostile officials, and the groundswell of public disapproval of tenancy.

Assailed by a concerted conspiracy not to pay rent and attacked by taxes and the investigations of land titles by the state, the landed proprietors were only too happy to sell out their interests. In some cases amicable settlements were reached by committees representing both parties. In August 1845 seventeen landholders in Greene, Ulster, Columbia, Rensselaer, and Dutchess counties announced that they were ready to make sales on reasonable terms.[32] In September of the same year Stephen Van Rensselaer who had inherited the west manor made a definite offer to his tenants in the Helderberg townships.[33] On the condition that the tenant would pay all arrears and $30 for the quarter-sales, he would sell the fee on the following terms: Wheat would be estimated at $1 per bushel, a day's service at $2, and 4 fowl at 50 cents. Thus the rent on a farm of 160 acres owing 14 bushels of wheat per 100 acres would amount to $26. If the farmer paid a sum which at 6 percent yielded this amount, he would receive the fee. By March 12, 1846 some 80 to 90 farms were released from rent burdens, part by cash and the rest by mortgage.[34] In 1848 William P. Van Rensselaer, heir of the east manor, offered similar terms for all leases in Stephentown. The *Albany Freeholder* reported in 1848 that about five hundred bonds had been executed between William Van Rensselaer and his tenants.[35] From the entire leasehold region came reports of the liquidation of old estates. The lawyer for the Livingston family declared to the court in 1850 that of the original 160,000 acres in the manor only 35,000 acres were still held under lease.[36]

Loss of income, the new taxes on ground rents,[37] and the prospect of fighting interminable court battles were no doubt the decisive factors inducing Stephen Van Rensselaer of the west manor to sell out his rights. In 1853 and 1854, Walter Church and Oscar Tyler, speculators in land, bought all his leases at from 50 to 60 cents on the dollar. Church agreed to pay only $210,000 for the leases in Albany County which had a nominal value of $550,000.[38] In 1857 Church and his associates made a similar agreement with William P. Van Rensselaer of the east manor.

The elimination of the leasehold was not accomplished on Rensselaerswyck or elsewhere without much hardship. Church soon won the enmity of the farmers of Albany and Rensselaer counties because of the vigor and skill with which he evicted defaulting tenants from their farms. On one occasion he testified that he had been interested in some two thousand cases.[39] The wave of ejectments culminated in the antirent outbreaks of 1865 and 1866 when once again the hooded Indians ranged through the Helderburg townships shouting, "Down with the rent."[40]

The leaseholders of the Hudson Valley were still fighting to overthrow the last traces of an aristocratic land system after the United States Government had used its war powers to abolish human slavery, another legacy from the colonial past. But the uprooting of leasehood tenure left deep scars on the agricultural communities of eastern New York. To the admittedly evil effects of tenancy were added the excitement, uncertainty, and bitterness of the antirent agitation. Many farmers in the hill towns where the exhausted soils, transportation difficulties, and the impact of western competition had already set in motion the forces of rural decline became discouraged and gave up their farms. Even if they had been willing to pay the annual rent, many could not pay the accumulation of back rents, most of them dating back to 1840. No doubt the 27 percent decline in the population of the Helderberg townships in the forty years following 1840 reflects in part the social disorganization caused by the antirent wars.

[32] *Albany Argus*, Aug. 18, 1845.

[33] *Ibid.*, Sept. 18, 1845.

[34] N. Y. Senate, *Documents*, v. 3, no. 92 (1846).

[35] *Albany Freeholder*, Feb. 9, 1848.

[36] See Joseph Sutherland, *Deduction of the Title to the Manor of Livingston* (Hudson, 1850), in Manorial Pamphlets, Cornell University Library.

[37] In 1847 Stephen Van Rensselaer memorialized the legislature charging that the law was abused. He complained that he had been assessed in seven towns for personal estate to the amount of $296,979, whereas the total amount of assessed personal estate in these towns was only $574,559. See *Albany Freeholder*, Mar. 31, 1847.

[38] Walter Church testified before a committee of the Assembly as to his business transactions. See New York Assembly, *Document 237*, p. 6–10 (1862).

[39] Simon W. Rosendale, "Closing Phases of the Manorial System in Albany," New York State Historical Association, *Proceedings*, 8:240–242 (1909).

[40] Ellis, Agrarian History, 461–462; Arthur B. Gregg, *Old Hellebergh* (Altamont, N. Y., 1936).

One final question may well be asked. Is there any connection between the leasehold and the growth of modern tenant farming? The scanty evidence on this point seems to indicate a negative answer. Thus the census figures of 1880 reveal that the percentage of tenant-operated farms in Columbia, Albany, and Rensselaer counties is not significantly different from that for the entire state.[41] The landholders were only too happy to get rid of their farms. The farmers naturally had built up a strong prejudice against leases. In addition, the constitutional provision forbidding new leases for over twelve years prevented land speculators such as Church from reestablishing the tenancy system once they had evicted the former lessee. Without further study of the county records it would be difficult to ascertain whether the percentage of mortgaged farms was higher in the leasehold region than in the state as a whole.

[41] The percentage of owner-operated farms in Albany County was 79; Rensselaer County, 84; Columbia County, 79. The percentage for the State was 83. U. S. Census Office, Tenth Census, 1880, *Statistics of the Population of the United States at the Tenth Census*. Apparently the Clarke family which owned about 13,000 acres in Clarkesfield, Montgomery County, followed a policy which transformed the leasehold into the modern lease. Tenants complained in 1843 that they were forced to accept annual leases after three-live leases expired. See *Albany Freeholder*, Dec. 29, 1847; and New York Assembly, *Document 261* (1847). In 1878 the Clarke tenants staged another revolt against an increase in rent.

The institution of leasehold tenure died hard. For well over a century, the Hudson Valley tenants had to struggle against the aristocratic land system. In one important respect they enjoyed a marked advantage over contemporary opponents of tenancy. The leaseholders could direct their fire against a small clique of landed gentry, whose aristocratic pretensions seemed out of step with the advance of democracy. Today the tenant finds himself up against a more impersonal system. Seldom do he and his fellow tenants hold their leases from the same source. Consequently tenant discontent cannot be focused on one lessor as it was on Livingston Manor where tenants felt a common interest and could organize a concerted drive to get rid of the landlord yoke. Furthermore, the aura of moral indignation with which the leaseholder could surround his fight against land titles tainted with fraud and smacking of feudal burdens gave his cause a crusading spirit lacking in the modern foes of tenancy.

By 1860 the tenant farmers of the Hudson Valley had largely succeeded in eradicating the institution of leasehold tenure. The story of their struggle illustrates two significant aspects of the long conflict between landlord and tenant. It is one of the final chapters in the fight against the vestiges of a feudal land system. It also provides an introduction to the contemporary struggle to check the spread of tenancy which has arisen under commercial agriculture.

PHILIP PUSEY, ENGLISH COUNTRY SQUIRE

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The inscription, "I Kyng Cnoote geue ye Wyllyam Pewze yis horne to holde thy londe," authenticated by antiquarian research,[1] records how the Puseys received their land in the vale of the White Horse, Berkshire, England. The modern branch of the family, however, dates back only to the later part of the eighteenth century when the last representative of the ancient Pusey family married the sister of the youngest son of Jacob Bouverie, first viscount Folkestone. Upon failure of issue, the estate was bequeathed to Philip Bouverie, a nephew thus by marriage, on condition of his assuming the name Pusey. From the union between this Philip Pusey and Lucy Sherard, daughter of the fourth earl of Harborough, issued five children, three of whom lived: Charlotte, who married Richard Lynch Cotton, provost of Worcester College, Oxford; the ecclesiastic, Edward Bouverie Pusey; and Philip (1799–1855), the subject of this article.[2]

The education of Philip Pusey compares with that usually afforded the scions of wealthier English country gentry—Eton, and then Oxford. Although he left college before taking a degree, he made the acquaintance there of some of the men who remained lifelong friends, especially Henry John George Herbert (Lord Porchester, later Earl Carnarvon), with whom he attended both Eton and Oxford, and whose sister he subsequently married. Probably his father's decision that he should not as yet marry determined him to complete his education by travelling abroad. After visiting several European countries, he returned just long enough to complete his courtship and marry the lady of his choice, with whom he settled in the Palazzo Aldobrandini in Rome. It was there that he met Chevalier Bunsen, the German diplomat who later spent thirteen years in England, much befriended by Pusey. Upon the death of the elder Philip on April 14, 1828, the younger succeeded to the estate and became a country squire.

Like a well-rounded Elizabethan courtier, Pusey filled his short life with many varied activities: he was a parliamentarian, an author on constitutional and agricultural topics,[3] a practical dirt farmer, an experimenter in agriculture—including agricultural chemistry—an editor, a model landlord, a student of conditions of the Scotch and English poor, and in his own little world of the county, a philanthropist.

Although Pusey spent many years in Parliament, he did not achieve great success there. He attended the sessions of 1830, and those from 1835 to 1852. As a party man he still let his conscience rather than the party whips guide his actions. His independent spirit reveals itself at once in a debate recorded by Hansard:

> However it might pain him to be separated for an instant from the party with which he had heretofore acted, and whatever mistrust of him it might produce amongst the members of the Church to whom he owed his seat in that House, he felt bound to declare that if the vote which he was about to give were to be the last he should give in that House, he considered the sacrifice due to his political opponents, who, he thought, were consulting the best interests of the Church. . . .[4]

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[1] Jacob, Earl of Radnor, "Observations on the Pusey Horn," *Archaeologia*, 12:397–400 (London, 1796). Cf. Pegge, "Of the Horn, as a Charter or Instrument of Conveyance . . .," *ibid.*, 3:1–15 (1775). There is a full-page engraving of the Pusey horn opposite page 13.

[2] Ernest Clark, "Pusey, Philip (1799–1855), agriculturist," in *Dictionary of National Biography*, edited by Sidney Lee and Leslie Stephen, 47:61 (London, 1896).

[3] Pusey wrote, among other things: *The Sinking Fund* (1828); *Sir Robert Peel's Financial Statement of 15 February* (1828); *The New Constitution*; and *The Poor in Scotland, compiled from the Evidence Taken before the Scotch Poor Law Commission.* Pusey's authorship found praise from contemporaries. B. S. Escott, in the *Quarterly Review*, 45:289, 324 (April 1831), referred to *The New Constitution* as "one of the best, both for reasoning and language, that have appeared during this crisis" and as an "excellent publication." All the necessary data on the Scotch poor "in a very manageable form," wrote another Quarterly Reviewer, can be found in the "skilful pamphlet of . . . Mr. Pusey."—*ibid.*, 132.

[4] T. C. Hansard, *Parliamentary Debates* (ser. 3), 29 (June 29–Aug. 3, 1835): 906. Cf. *ibid.*, 102 (Feb. 1–28, 1849): 75. During a debate on the bill, Pusey intimated that Sibthorp opposed without ever having read

Pusey's intellect and conscience prohibited his ever becoming a party cog and doing what he considered wrong.

After Lord Portman had failed in 1843, 1844, and 1845 to excite sympathy in the House of Lords on the question of compensating tenants for unexhausted improvements, Pusey led a similar movement in the Commons from 1847 to 1850. To his last parliamentary days, he fought ardently for the bill, which was strongly opposed by the members of the landed interest.

When Pusey first introduced his agricultural tenant right bill, he was attacked immediately on the grounds that he would interfere unnecessarily between landlord and tenant and disturb the mutual good feeling that then existed between them. Colonel Sibthorp announced that he would never sanction the introduction of such "rigmarole" bills.[5] Others felt that the House should at least listen to Pusey. S. Herbert believed "that any Bill on agricultural matters, emanating from a Gentleman of such talent and experience as the hon. Member who introduced this measure, was deserving of respectful attention and consideration."[6] Others definitely approved of the bill. Criticism of the legal structure of the bill elicited from Pusey the response that it was the result of many years' labor and that it had been drafted by one of London's best conveyancers. However, when the House went into a committee on the bill, further criticisms appeared. One member objected because the measure might be designated an act for enabling fraudulent tenants to rob their landlords with greater facility; Newdegate demanded inquiries into the customs of the country as between landlord and tenant; even Sir Robert Peel, an acknowledged friend of Pusey and his bill, doubted whether the House had sufficient information to enable it to legislate on the subject. These objections served Pusey as a guide when, as chairman of a committee "upstairs," he redrafted the bill.[7] However, when Pusey brought the bill out, he intimated that he would push it no longer. His reasons were practical ones. Although he had presented petitions in favor of the bill, three of them signed by farmers occupying 200,000 acres of land, he thought the landed interest still dissatisfied. He assured the House that his objective was not to "make speeches" but to foster "practical legislation." Although Peel spoke in favor of the bill, as one which would stimulate the application of capital to the soil, Pusey withdrew it.[8]

Pusey prefaced the introduction of the bill the second time with the comment that the inquiries suggested in the House had been made. Sibthorp immediately objected. "This Bill resembled Parr's life pills and Holloway's ointment—it proposed to cure all diseases by one unvarying specific. . . ." Sir H. Verney came to the rescue by seconding the motion for reading the bill. "No Gentleman in that House," he added, "had conferred greater benefits upon the whole agricultural interest of this country, than that hon. Gentleman had done by his valuable services. The agricultural interest was deeply indebted to him. . . ."[9] The bill was characterized as one which would do justice to occupying tenants, as a remedy of a very serious evil as regarded tenant farmers. A division placed the names, among others, of Lord H. Bentinck, John Bright, Robert Cobden, Benjamin Disraeli, and W. E. Gladstone in favor of the bill. On the second reading, Pusey stressed again the need of "encouraging the application of capital to the land," and the bill finally passed, only to be rejected by the lords. Little trouble was experienced in passing the bill a third time, as amended and revised, in the summer of 1850, but for the third time the Lords turned it down.[10] A writer in the *Farmer's Magazine* eulogized Pusey's stand as follows:

> So long as Mr. Pusey was a member of the House of Commons, so long was he the representative of the tenant farmers of this country. It will stand well to his credit, and answer many an argument which ignorance or selfishness may have prompted, that Philip Pusey, the leading man of the great agricultural association of this country, was the unwavering champion of the TENANT RIGHT principle. From the first moment he recognized its effects, from that moment did he continue firm in its advocacy. No matter how little he prevailed in "the house"—no matter how much prejudice or something worse may there have been told

it. Sibthorp called this impertinence but was reminded that "impertinence" was not a parliamentary word. Sibthorp apologized, and Pusey assured him that he had meant no personal offense.

[5] *Ibid.* (ser. 3), 90 (Feb. 16–Mar. 15, 1847):383–384.

[6] *Ibid.*, 384.

[7] *Ibid.* (ser. 3), 91 (Mar. 16–Apr. 26, 1847): 541–543.

[8] *Ibid.* (ser. 3), 92 (Apr. 27–June 1, 1847): 719–721.

[9] *Ibid.* (ser. 3), 103 (Mar. 1–28, 1849): 689.

[10] *Ibid.* (ser. 3), 110 (Apr. 8–May 13, 1850):1061–1066; 111 (May 14–June 13, 1850): 1119–1128; 113 (July 19–Aug. 15, 1850): 850.

against him, it is satisfactory to feel that by the country his efforts *have* been appreciated. . . . Mr. Pusey, with all the advantages education and practical knowledge could afford him, dared as a landlord to plead the tenant's *right*.[11]

Disraeli commented, when many of Pusey's ideas finally became law in the Agricultural Holdings Act of 1875, that "Mr. Pusey was the first person to introduce into this house the term tenant right."[12]

It may seem strange that a man who had expended the greater part of his energies during the most active years of his life in the cause of agriculture should have had little to say in the parliamentary discussions on the Corn Laws. Pusey had, however, taken a stand in favor of protection as early as 1838. "He thought the present [Corn Laws] the best protection which could be given to the agriculturists, that it did not work harshly upon manufacturers, and that there never was a time when the agriculturists had made such exertions to deserve the protection they enjoyed."[13] This attitude offended his constituents, and his struggle for the Maynooth grant alienated those who desired that public moneys should be granted only to Established Church schools. In consequence Pusey's reelection to Parliament appeared doubtful. Moreover, although he denied it, he remained accused of believing in the "Romish" practices advocated by his brother Edward, the founder of the Puseyite movement.[14] With the approach of the 1852 elections, Pusey withdrew his candidature and retired from Parliament.

Pusey's contribution to the legislation of the realm remains the Act (3 and 4 Victoria, cap. 55) which provided that landowners unable to carry out permanent improvements by drainage because they lacked capital could borrow funds on mortgage, to be paid off with interest within eighteen years. Whatever influence Pusey was able to expend upon fellow parliamentarians most likely emanated from such powerful friends as Peel and Gladstone. With these gentlemen, as well as with other leading thinkers and public men of his time—Samuel Rogers, Monckton Milnes, Lord Spencer, Bishop Wilberforce, Lord Stanhope the historian, Carlyle, and Grote,—he breakfasted and met at social gatherings or at clubs. Baron Bunsen, who arrived in England in 1838, wrote to his wife: "Breakfasted with Pusey on ham and philosophy. I wish I could give you an adequate idea of the speculative talent and depth of Pusey. There is no Englishman I know who has studied this subject so much; he takes Schelling as easily as Plato."[15] Again: "He is a most *unique* union of a practical Englishman and an intellectual German, so that when speaking in one capacity, one might think that he had lost sight of the other."[16]

Pusey, who found pleasure in reading Demosthenes' speech, *De Corona*, "which he knows almost by heart," was, however, a simple and unaffected country squire whose name is remembered for his contributions to English agriculture rather than for his scholasticism.[17] Sir James Caird, no mean agricultural authority in his own right, called Pusey "the leading agricultural writer of his day."[18] Ample justification for this statement may be found in the forty-seven articles that Pusey wrote for the *Journal* of the Royal Agricultural Society of England, which he edited for seventeen years. In fact, Pusey was one of the prime movers in the establishment of the society, whose motto, "Practice with Science," explains the methodology of Pusey himself, and is the source for R. E. Prothero's caption to his discussion of English agriculture in the period 1845–73.[19]

> It was an early, and dearly cherished delusion of several generations of farmers, long since passed away, that all improvements in agriculture could only emanate from those who cultivate, as it were, with their own hands. . . . Time, however, and more especially the general progress of education, introduced other and happier views. Men of different professions began to see the advantages to be derived to the farmer by new methods of tillage; and some of these had the courage to publicly tell the English farmer this great truth.[20]

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[11] *Farmer's Magazine* (ser. 3), 8:132 (London, August 1855).

[12] Clark, "Pusey," 62.

[13] Hansard, *Parliamentary Debates*, 57 (Mar. 8–May 6, 1841): 1365.

[14] Clark, "Pusey," 62. "I hear that among electioneering tricks, some call me a Puseyite. I am no more than Lord Shaftesbury is; but I will not consent to find fault with my brother in public."

[15] Frances Bunsen, *A Memoir of Baron Bunsen*, 1:509 (London, 1868).

[16] *Ibid.*, 522.

[17] *Ibid.*, 613.

[18] James Caird, "Agriculture," in Thomas Humphry Ward, ed., *The Reign of Queen Victoria*, 2:130 (London, 1887).

[19] Rowland E. Prothero, *The Pioneers and Progress of English Farming*, 104–114 (London, 1888).

[20] *Farmer's Magazine* (ser. 2), 10:1 (July 1844).

Philip Pusey was one of these men. Like Fitzherbert, Worlridge, Tull, Young, Sinclair, Francis, Coke, and Bakewell, Pusey was not bred to be a farmer. Yet by his own practical farming, by his unremitting experimentation, by the publication of his methods, researches, and conclusions, by his editorship of the *Journal* of the greatest society devoted to agriculture in England, and by his great ability and zeal, Pusey pushed forward the spirit of progress in English farming.

On May 9, 1838, a number of individuals intensely interested in the formation of a society for the dissemination of information which would assist the cause of English agriculture met at the Freemason's Tavern. On Pusey's motion, the annual meetings were not to be confined to the capital, but held successively in different parts of England and Wales. Pusey had the distinction, as a commoner, of being chosen the first president of the society, although a number of lords were present. He, also, upon the appointment of a journal committee, became its chairman, in which capacity he gave gratuitous service for seventeen years. Moreover, as a singular distinction, Pusey was the only man to be twice president (1840–41, 1854–55) of the society in the early years of that body.

As president in 1840, Pusey described "The Present State of the Science of Agriculture in England."[21] This address shows his interest in seemingly little things. If any improved process would add to the produce of either arable or pasture land, the increase of one farm, added to the increase of all other farms, would represent a very large addition to the national wealth. Any improvement of a permanent nature, drainage for example, would also increase employment, affording the work needed by agricultural laborers during the winter months.

One of the major problems of the time was that while husbandry, "on the large scale, stands in the first rank, as far as the surface of the ground is concerned, it must equally be admitted, as regards the subsoil, to be yet in its infancy."[22] An improvement in the different types of plows suitable to different types of soils was needed. After this the question of manures "deserves inquiry as much as any branch of agricultural practice. . . ."[23] These manures should include those procured by the farmer himself or the refuse of certain trades.

After the ground had been prepared, there was still room for inquiry and improvement. What was the best time for planting of wheat, for instance? How much seed should be sown? By what method? Moreover, warned Pusey: "it is not enough for the farmer to know the best management of an individual crop, even of all crops singly, unless he know also in what order of succession they should follow each other. It is by improved knowledge of this order, and a better selection, that much improvement has already been effected in British agriculture."[24] Again, there was no phase of agriculture in which inquiry was more needed than the diseases of plants, the habits of the animals which prey upon them, and the ascertainment of remedies. Other branches of scientific knowledge should be called in to help the farmer. However, this was not all—after the crop was harvested, it should be well cared for. Once ready for market, the practical hand farmer should look at the machines, impelled by water or steam, which promised to reduce his back-breaking toil. "The more labour is thus set free from mere work of routine, the more will be applied to the further improvement of the parent of all agricultural labour, the soil."[25] Finally, there were the animals, essential to farming, which, while they embellished and enlivened rural scenery, were "indispensable to the fruitfulness of the soil." Their contribution to this fruitfulness in turn depended upon their feeding.

The topics which Pusey mentioned in this, his first paper, form the subjects for forty-six additional papers which he contributed to the *Journal* between 1840 and 1854. He experimented on draught in plowing,[26] from which he concluded, erroneously, that wheel plows were superior to swing plows. The following comment was offered by a Quarterly Reviewer:

> In 1840, Lincoln, Rutland, Bedfordshire, Berks, and almost every other county, had had its separate plough, and knew little of its form in the rest of the kingdom; the exceptions being among the customers of scientific makers, whose trade was restrained by the cost of conveyance, the want of publicity, and the want of intelligence. Mr. Pusey and Mr. Handley, who contributed articles on the Plough to the first volume of the Royal Agricultural Society's Journal, were, as gentlemen

[21] Royal Agricultural Society of England, *Journal* (ser. 1), 1:1–21 (London, 1840). Hereafter cited as R.A.S.E., *Journal*.

[22] *Ibid.*, 7.

[23] *Ibid.*, 10.

[24] *Ibid.*, 12.

[25] *Ibid.*, 16.

[26] *Ibid.*, 219–244.

farmers, far ahead of their time, but it is evident, from their observations, that they had everything to learn in the science and practice of agricultural mechanics. Mr. Handley's acuteness led him to conclude that wheel ploughs were of lighter draft, 'contrary to the opinions of the writers' whom he had consulted; but Mr. Pusey, in his general report on English agriculture, evidently prefers the Scotch swing plough, not aware that the old Bedford wheel plough, even in its unimproved state, was a better implement. After mentioning the instances in which the Scotch plough failed, he hesitatingly adds, 'It is even doubted whether one wheel might not be advantageously restored' .... These trials, valueless in themselves, were the commencement of investigations by well-informed persons under the auspices of Mr. Pusey, and of a series of public competitions, which have placed ploughs constructed on the best principles, and in the best manner, within the reach of every parish in England.[27]

This rather long excerpt is the sole adverse criticism found in the course of this study of Pusey's work. It reveals the sad condition of agricultural mechanics at the time; it shows that Pusey, as editor, chose to publish the results of experiments on plows in the *Journal*; and, regardless of this one failure, it delineates Pusey as a gentleman farmer far ahead of his time. Much of Pusey's work has been superseded—his experiments on artificial fertilizers, for example, were corrected within his own lifetime by Sir John Bennett Lawes—but Pusey knew enough himself to correct certain conclusions erroneously drawn by the famous Liebig.

Pusey carried on a number of experiments to prove the efficacy of nitrate of soda as a manure. He spoke favorably of it.[28] The improvement of peaty ground engaged his attention, and he told not only how to drain the ground, but how to burn it off, and what manures should then be applied to produce a good crop of rape or Swedish turnips. Moreover, the next crop should be barley, followed by rye grass. It was characteristic of Pusey, in almost all of his articles, to look beyond the conclusions to which his experiments led him. Interested immediately in his conclusion, he moved on to show how the improvement would aid the farmer, how it affected the laborer as well as the soil, how it would benefit the Nation, and, finally, how much it would cost and yield in monetary values.[29]

[27] *Quarterly Review*, 103:420–421 (London, 1858).
[28] R.A.S.E., *Journal*, 2:117–124 (1841).
[29] *Ibid.*, 400–416.

One of Pusey's most important articles is his summation "On the Progress of Agricultural Knowledge during the last Four Years," published in 1842.[30] Here he argued that the extension of science may mean two different things—the spread of existing knowledge among a wider number of persons, or the discovery of hitherto unknown principles. The former was the more important immediate need. Then Pusey very logically and consecutively discussed the soil itself, then tillage and seed time, and so to harvest. Again and again, Pusey insisted on thorough-draining: "All ... who are at all acquainted with improved husbandry are now agreed that on wet land thorough-draining is to a farm what a foundation is to a house."[31] Thorough-draining had changed the entire character of the farm. Once clay lands had grown the corn that fed England, but turnip culture had resulted in a demand for light-land farms on which sheep could be folded at all seasons, and clay farms had fallen into disrepute and into inferior hands. All landlords, if possible, should drain. To make this feasible, Pusey obtained the passage of the permissive Drainage Act in 1847.

Of the materials to be used for draining, tile was held to be the best. New inventions would soon produce tile so cheaply that "within the next ten years a large part of England will probably be thorough-drained, and at no distant date a soaked field will be as little tolerated as ruined barns or foul crops ... it is vain to speak of good farming until we have land which deserves to be farmed well."[32]

So far as manures were concerned, clay was better than dung.[33] "It is, I believe, a fundamental principle of agriculture, that each soil has a limit beyond which manure cannot force it. ... I would add another rule. Strengthen the soil itself while you are able, and you raise that limit permanently."[34]

Pusey's hope that every individual farm would provide some employment for laborers during the winter was more than wishful thinking on his own estate, where he employed at least five hundred men on 5,000 acres.

[30] *Ibid.*, 3:169–217 (1842).
[31] *Ibid.*, 170. Cf. "Note by Mr. Pusey" on the cost of tile draining, 5:556–559 (1844).
[32] *Ibid.*, 3:178–179 (1842).
[33] Pusey's data is presented as written, with no attempt to pass judgment on the agricultural chemistry involved.
[34] R.A.S.E., *Journal*, 3:182 (1842).

To answer Pusey's question of whether a saving of horses could be effected by substituting one-horse carts for the traditional heavy English "waggon," trials were made with the result that, by adopting the smaller cart, one horse out of three was spared. With improvements in plows, which could now be drawn by two horses instead of three, a substantial saving was also accomplished.

The traditional four-course rotation, in which wheat provided the bread, barley the beer, and clover and turnips the beef and mutton, was then examined. Besides swedes and mangel-wurzels, the white carrot, introduced after 1838, promised to break the monotony of the four-year rotation course. As yet nothing was known of the possibilities of the new spurry or of maize (Indian corn).

Agricultural writers like Prothero have often used the term "high farming" to indicate a method which, beginning with the 1840s, transformed the agricultural economy of England. Pusey gave a very simple explanation: "It is well known to farmers, though not to others, that the dung of an ox fattened with corn or oil-cake is far more valuable than that of a cow kept in merely ordinary condition—perhaps worth twice as much. This principle is the great distinction of English agriculture, and constitutes what is called high farming . . . high feeding, which is high farming. . . ."[35] Thus, Pusey approached what he considered the most difficult subject in agriculture, namely manure. Although much had been learned in the preceding four years, he held that the sum total of that knowledge was still nothing. The principles upon which these manures act were known; their application to the daily work of the farm remained unknown. Experiments with nitrate of soda and ammonia had resulted in complete success in some instances and dismal failure in certain others. No doubt the mysterious principle upon which these worked would some day be discovered—here again it was a case of having the principle but not knowing how to apply it. Pusey expressed more confidence in the new manure, guano, which had two circumstances in its favor: "one, that it is in fact dung, though of very ancient origin, still bird's dung, which is known to be the most powerful of all manures—the other, that it has experience in its favour. . . ."[36] Pusey concluded his second report on the state of British agriculture with a discussion of Liebig's chemistry, and the comment, not borne out by the facts, that it would still be some years before chemistry really aided agriculture.

Sometimes Pusey sent out questionnaires to practical farmers in order to gather data for articles. An example is his paper on "Evidence on the Antiquity, Cheapness, and Efficacy of Thorough-Draining, or Land-Ditching, as practised throughout the Counties of Suffolk, Hertford, Essex, and Norfolk," which is a collection of answers to the questions: How long the practice has lasted? Over what extent of country? At what price per pole? At what distance and depth? Pusey offered the evidence, with conclusions drawn from it, as additional proof that his theories worked in practice.[37]

Pusey always held that trees and hedges and even fences, unless absolutely necessary or kept as ornaments, should be removed from farm land. On his own estate all that remained were ornamental trees and vital sheep fences. Also, he believed that enclosures, at least of wastes and moors, proved a benefit rather than detriment to the poor.[38]

Much like Young and other progressive agriculturists, Pusey concerned himself with the production of crops which, grown in succession, would provide animal fodder all year around. In this interest he carried on a number of experiments with St. John's-day rye, a rye which grew twice as thick as common rye, and which remained sweeter for a longer time as a spring feed for sheep.

Pusey's obsession, if he ever had one, was the production of a superphosphate of lime which could be drilled into the land rather than poured on in liquid form. The Duke of Richmond and Sir John Bennett Lawes in England, Liebig in Germany, and Boussingault in France carried on experiments simultaneously.[39] Lawes practically ended the argument when he patented a superphosphate in 1842, but a more important question still remained. It was known that both nitrogenous and ammoniacal substances, used singly or together, fertilized the soil. The element in these substances that actually did the fertilizing was not found until these experimenters of the mid-century had passed away. This matter of fertilizers intrigued Pusey. He tried burnt clay upon wheat growing on very heavy clay land;[40] he experimented with artificial fertilizers upon root

[35] *Ibid.*, 205.
[36] *Ibid.*, 211.
[37] *Ibid.*, 4:23–49 (1843).
[38] *Ibid.*, 76–80, 287–316.
[39] *Ibid.*, 6:324–328 (1845); Chester Kirby, *The English Country Gentleman*, 177–187 (London, 1937).
[40] R.A.S.E., *Journal*, 6:477–478 (1845).

crops;[41] he found that 16 bushels of unprepared bones, 8 bushels of heated bones, and 4 bushels of sulphated bones (bones dissolved in sulphuric acid) each produced the same effect on a similar plot of growing turnips.[42] He studied the putrefaction of bones and the use of nitrate of soda as a top-dressing for wheat;[43] he described the source and supply of cubic saltpeter and nitrate of soda and estimated their ability to restore corn crops.[44] His last presidential paper, written at a time when England feared the possible exhaustion of the Peruvian fields, discussed the possibilities of substituting nitrate of soda for guano.[45] His last paper, published posthumously and without revision, concerned the elementary principle of applying fertilizers to wheat.[46]

Although Pusey was chiefly concerned with thorough-draining, he also experimented with the application of water to land either by warping or by making catch-meadows. Warping implied the flooding of land with water obtained from neighboring streams or rivers, not to bring in silt and thus create new land, but just enough water to cover the land so that a person could walk over it and not get his feet wet. The irrigation imparted the superior warmth of the stream to the meadow. The theory of irrigation was as follows:

> Water acts upon meadows by imparting its warmth to them; perhaps also as a covering, by enabling them to retain their own warmth. If the water contain mud or fine soil its action is stronger. If the drainings of yards or of towns, stronger still. On the other hand, the colder the stream the less likely it is to act, and its powers are weakened or destroyed by the presence of carbonic acid (by hardness), or of iron, or of tannin. The quality of the fish has been seen to indicate that of the water. A well-known herb, the *watercress*, is said to be an *unfailing* witness for the goodness of the stream along whose bottom it flourishes.[47]

Irrigation could be achieved at some expense by reshaping the contour of the land and by warping; or cheaply, by terracing a hillside and catching the water as it fell from a spring. "If I dwell often on cheapness of construction in farming," said Pusey, "it is because no improvement can become general if it be not also cheap. It is by reducing the cost of production that the Lancashire manufacturers have sent our cottons around the world."[48] After telling how thirty-six sheep could be kept on irrigated land which previously fed only sixteen, Pusey added: "As in other branches of farming, so in the management of water-meadows, constant attention and the master's eye are essential to complete success."[49]

Another important paper written by Pusey for the *Journal* was "On the Progress of Agricultural Knowledge during the last Eight Years," which appeared in 1850. This is the best of his "progress" papers. "Agricultural improvement," Pusey assured the reader, "which might hitherto be looked on as a hobby for a few country gentlemen, is now become the unavoidable business of landowners generally."[50] He dealt first with agricultural chemistry, relating that Liebig's theory that the minerals plants take from the soil must be replaced had been found faulty by the experiments of Lawes. It was nitrogen that plants needed. Excepting Liebig's suggestion for dissolving bones with acid and Sir Robert Kane's idea of using flax-water as manure, there had been no progress in agricultural chemistry in the last eight years. This did not mean that experimenters should abandon the field—rather they must double and treble their efforts. Mineralogy too must be studied with reference to agriculture.

More progress had been made in the science of agricultural mechanics than in any other field. Land should be improved by draining, by removing useless fences, and by diminishing the number of four-footed game. Pusey favored the application of burnt clay as a fertilizer and the claying or marling of land, especially blowing sands. Lime was good; boning and chalking had proved successful in certain localities but needed further trials. Irrigation, the breaking up of grass land, and the repair of farm buildings completed the list of improvements landlords should undertake. Pusey's next concern was chemical fertilizers. How was ammonia to be prevented from escaping before it could be got into the ground? Further, the landlord and tenant should make some agreement between them to do only what was good for the soil. And finally, foul land should be cleared of weeds, including their seeds.

In 1851, at the instigation of Prince Albert, a royal exhibition of the industries of all nations was

[41] *Ibid.*, 528–532.
[42] *Ibid.*, 8:417–420 (1847).
[43] *Ibid.*, 9:530–531 (1848); 12:202–204 (1851).
[44] *Ibid.*, 13:349–367 (1852).
[45] *Ibid.*, 14:374–392 (1853).
[46] *Ibid.*, 6:528–532 (1845).
[47] *Ibid.*, 10:467 (1849).
[48] *Ibid.*, 471.
[49] *Ibid.*, 475.
[50] *Ibid.*, 11:381 (1850).

held. Pusey took charge of the exhibit of agricultural machinery, with the objective, as he said, "to state plainly . . . the practical effect of machinery upon the soil or its products. . . ."[51] He divided the report to the Prince Consort into seven sections, and so it appeared in the *Journal*: Instruments of Tillage; Implements used in the Cultivation of Crops; Harvesting Implements; Preparation for Market; Machines for Preparing the Food of Stock; Churns; and Draining. The list of implements under each of these headings is too long to reproduce, but Pusey stressed the use of those which he had recommended since their invention. The trials of various types of harrows, rollers, clodcrushers, and cultivators were held at the Pusey estate, and the first demonstration of a McCormick reaper in England was staged there. The progress of agricultural machinery had saved the farmer half of his outgoing expenses; compared with their inestimable good, farm machines were cheap. Leaving out such factors as the weather, the machine had reduced agriculture to a science of "comparative certainty." As yet, however, few of the best farmers who possessed machines used them thoroughly—the new implements required a new system of agriculture.

The report on the exhibit of 1851 was one of the last of Pusey's labors. After his death a letter was written to Pusey's family by the new President of the society, Lord Portman:

> The Council of the Royal Agricultural Society of England has directed me, as the President, to assure the family of the late Ph. Pusey, Esq., that the Society deeply and unfeignedly unite with them in their grief for the irreparable loss which they have sustained in the early and lamented death of the beloved father . . . while the recollection of parental affection and domestic virtue will long endear his memory to all members of his family, his distinguished position when twice elected President of the Royal Agricultural Society of England, and his unceasing labours for seventeen years as Chairman of the Journal Committee, will long be cherished by his surviving colleagues, and be remembered with gratitude and respect by every member of this Society.[52]

Not long after came a reply from the trustees of Pusey's estate, who, feeling that perhaps this was not the occasion on which to speak of his private virtues, felt that of Pusey himself

> it will long be remembered that to practical habits of business he joined deep philosophical thought, accurate scholarship, and genial appreciation of the arts and letters of modern as well as ancient times—that he applied a powerful intellect, with a keen forecast of the wants of his country, to develop the resources of British farming—and that, by a rare union of endowments, he did much to render science practical, and to win for agriculture a worthy place among the intellectual pursuits of the present day. How much labour he underwent, what forbearance and discrimination he exercised, how considerate he was of the feelings of others, how modest in the expression of his own, may never be known except to his personal friends. . . .[53]

After the death of Pusey, there was little advance from the best agricultural practices of the time.[54] The limit of agricultural production, a limit which the application of science could not extend, had been reached by about 1850.[55] The decade ending with 1862 was probably the most prosperous decade ever enjoyed by British agriculturists.[56] With J. J. Mechi, the most notable of the "apron-string" farmers,[57] James Hudson, secretary of the Royal Agricultural Society for many years, Fisher Hobbs, and John Bennett Lawes, Philip Pusey remains one of the foremost agriculturists of his day and the leading agricultural writer of his time. "Amongst the many good men who have made for themselves a name and reputation in the pursuits of agriculture, none can be mentioned with more deserved distinction than Mr. Philip Pusey."[58] The Royal Agricultural Society of England may be said to represent a monument to his fame. He was a member of the committee of management in 1839–40, during which year he also acted as chairman of the geological committee. After the establishment of the society he was elected its first president. He served as a member of the council for five years (1840–45), as a trustee for ten years (1845–54), as editor of the *Journal* from 1838 to 1854, and as president again from 1854–55. He contributed books to the society's library and wrote more articles for the *Journal* than any other contemporary.

[51] *Ibid.*, 12:587 (1851).
[52] *Ibid.*, 16:607 (1855).
[53] *Ibid.*
[54] Caird, "Agriculture," 138.
[55] G. M. Young, "Portrait of an Age," *Early Victorian England, 1830–1865*, 2:485 (London, 1934).
[56] W. E. Bear, "Agriculture, 1846–1865," in H. D. Traill, ed., *Social England*, 6:409 (London, 1897).
[57] Merchants who bought estates and farmed practically.
[58] *Farmer's Magazine* (ser. 3), 8:132 (1855).

Besides his work for the society, Pusey farmed an estate typical of the holdings of more prosperous squires, consisting of 5,000 acres. On coming into possession, he found it undrained and covered with hedges, banks, and trees. He attracted attention when he thorough-drained, laid his arable farms out into single fields, and removed all unnecessary impediments to the plow. He followed the principle of employing many laborers, first to create employment, and then to use them in improving inferior plots of land. He used the allotment system widely, and having let over four hundred allotments, he concluded that the system was a good one. His laborers loved him, and there were many reasons why they should; in one instance, at his own expense, he took five hundred of them to see the Great Exhibition. In return his men presented him with a silver snuffbox and had his picture (with the snuffbox below) framed and hung over the fireplace in every cottage on the estate. There was a natural frankness and a warmheartedness about him that attracted others to him, whether laborers, fellow parliamentarians, or other acquaintances. Baron Bunsen, for example, in a letter to his wife, wrote:

> I wish I could give you an adequate idea of the love and admiration I feel for Pusey: *admiration* for his extraordinary statesmanlike judgment, wherever he is, on the ground of his parliamentary life and business, in which he moves as a fish in the water; not less for his admirable temper and character: and *love*, for his unspeakable goodness to me. . . .[59]

Pusey was, according to a writer in the *Quarterly Review*, "an example of that delightful combination of scholarship and practical energy which is so common in England, and he exercised the double influence of an accomplished gentleman and an enlightened agriculturist."[60] Probably the years from 1838 to 1852, when he retired from Parliament, were the most prosperous in Pusey's career. Closely in touch with many of the leading figures of the day, receiving occasional visits from Bunsen, during which philosophy, art, and religion formed the staples of conversation, and busy with the Royal Agricultural Society, he still found time to attend the meetings of various learned societies, to partake in the work of the original committee of the London Library, and to attend such clubs as the Athenaeum, Travellers', and Grillion's. The *Quarterly Review* published unsigned articles by him on philosophy and the *Morning Chronicle* accepted his comments on current topics. He failed to have Milman's hymns substituted for those of Sternhold and Hopkins in the church service, but contributed several hymns of his own, the best known of which is "Lord of Our Life and God of Our Salvation." Besides this he proved a connoisseur of art, a collector of prints, of engravings, and of autographs. As a sportsman he is credited with having driven a four-in-hand over the Alps, and of course he hunted over his own land. He felt that hares, if not too numerous, and pheasants and partridges, should be left for game, although rabbits were indefensible.[61]

When at home Pusey lived the life of the country squire. Up at six, he superintended all the operations of his farms, whose economy centered about the breeding and feeding of sheep. From Devonshire he introduced the water-meadows he so well described in the *Journal*.[62] As an excellent landlord he improved and rebuilt his laborers' cottages, employing a special architect for the task.

Pusey's honors, for example, the D.C.L. from Oxford in 1853, came late and at a time when he could not have been too well disposed to enjoy them. When his parliamentary career closed, he lost many of the associations which had proved dear to him. From the autumn of 1852, the last long illness of his wife, at whose bedside he remained, deprived him of contacts with other agriculturists. Separation from the concerns which he had made his life work influenced him deeply and perhaps affected his health and shook his constitution.[63] On the death of his wife on November 13, 1854, he went to live with his brother, and although disabled by a paralytic stroke just a week after his wife's decease, it was not until a second stroke overtook him on July 9, 1855 that the life of this country squire who had done so much to forward the progress of English agriculture was ended.

[59] *Memoir of Baron Bunsen*, 1:504.
[60] *Quarterly Review*, 103:407 (London, 1858).
[61] R.A.S.E., *Journal*, 11:405 (1850).
[62] *Ibid.*, 10:462–479 (1849).
[63] *Farmer's Magazine* (ser. 3), 8:133 (1855).

THE EARLY SILK INDUSTRY IN MICHIGAN

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Although Michigan ordinarily is not included among the States that shared in the enthusiasm for silk culture, the role of the State was not entirely insignificant.[1] In spite of the collapse of the initial *Morus multicaulis* boom in 1839, sericulture attracted extensive attention among certain farmers, manufacturers, and advocates of self-sufficiency. Michigan was not as well adapted to any phase of the industry as were the majority of States where it was attempted. Nevertheless, the friends of silk, although not as numerous and successful as elsewhere, were vocal and enthusiastic. They experienced, however, the same lack of success that befell the attempts elsewhere.[2]

Between 1840 and 1843, there was a general revival of interest in silk, and Michigan climbed on the bandwagon. The 1839 collapse was either minimized or explained away. Lack of previous disastrous experiences undoubtedly forestalled the skepticism prevalent in other areas where the failures of earlier experiments were still remembered. There were numerous demands for State bounties on various agricultural products, and many believed that the potentialities of silk culture justified its receiving governmental assistance.[3] The farmers were unusually well informed of agricultural happenings and progress because of their close ties with New England and western New York, the centers of interest in silk and the previous homes of the majority of Michigan inhabitants. The organization of many county agricultural societies stimulated further interest in the most recent experiments, while Michigan's own farm journal, initiated in 1841, called attention to silk culture as a means of increasing agricultural wealth. Meanwhile, the numerous advocates of both self-sufficiency and a high tariff, as well as friends of local manufacturing, undoubtedly also played a part in emphasizing the importance of the silk industry for the State.

The early discussions of silk were indefinite and stressed both the production of raw silk and its manufacture. Throughout the early months of 1840, a Detroit merchant advertised silkworm eggs and both Alpine and *Morus multicaulis* trees for sale. As an incentive to silk production, a representative from St. Clair County annnounced that he would ask the legislature for permission to introduce a bill to incorporate a silk-manufacturing company.[4] Although the bill was apparently never introduced, the editor of the Detroit *Daily Advertiser* took the occasion to enumerate the major arguments in favor of silk culture.

> The making of silk in this country is no longer a matter of doubt. From undoubted authority, we are informed that one acre of land planted in mulberry trees will produce silk enough annually, to clear more than two hundred dollars per acre. The feeding season lasts from three to eight weeks. The feeding of worms, the gathering of leaves and the reeling of silk, can be accomplished by infirm old men, women and children. Almost every family could raise, without interfering with other business, from one to two hundred dollars worth of silk from trees planted in hedges for fences. . . . We confidentally [*sic*] look forward to the time when the silk business will rival that of cotton. . . . Every alms house in our country ought to have extensive grounds attached to it, planted to mulberry, in order that the class of laborers among its occupants which are not suited for other pursuits, may be brought into requisition for the silk culture.[5]

[1] John Clarke, *A Treatise on the Mulberry Tree and Silkworm*, 131–132 (Philadelphia, 1839). This contemporary account mentions the neighboring States of Ohio, Indiana, and Illinois but does not include Michigan. Later surveys of the silk industry likewise do not refer to Michigan experiments. See L. P. Brockett, *The Silk Industry in America* (New York, 1876); William C. Wyckoff, *American Silk Manufacture* (New York, 1887); Robert Price, "*Morus Multicaulis*, or, Silkworms Must Eat," *Ohio State Archaeological and Historical Quarterly*, 45:265–272 (1936); and Elizabeth Hawes Ryland, "America's 'Multicaulis Mania,'" *William and Mary College Quarterly Historical Magazine* (ser. 2), 19:25–33 (1939).

[2] Wyckoff, *American Silk Manufacture*, 10–33, contains a good summary of the developments.

[3] This trend was universal at the time. Percy Wells Bidwell and John I. Falconer, *History of Agriculture in the Northern United States, 1620–1860*, p. 193 (Washington, 1925).

[4] Michigan, House of Representatives, *Journal*, 1840, p. 217.

[5] Detroit *Daily Advertiser*, Feb. 17, 1840.

Similar expressions of opinion were to be found in some of the up-State journals.[6]

Progress was far from rapid, however, as the census returns for 1840 show that only 266 pounds of cocoons were raised. The crop was distributed by counties as follows: Calhoun, 6; Lapeer, 50; Livingston, 100; Oakland, 9; Shiawassee, 1; and Washtenaw, 100.[7] As Lapeer, Livingston, and Shiawassee counties had been settled recently, it is evident that the interest in silk was evenly divided between the older and newer communities; but the manufacture of silk was confined to three counties. In Kalamazoo, where apparently no cocoons were raised, 3 pounds with a value of $9 were reeled. Oakland County had one manufacturing establishment with a capital investment of $30, while Washtenaw reported that two men employed in establishments with a capital investment of $50 had reeled 5 pounds of silk valued at $25.[8]

More definite progress in silk culture was made in 1841. The appearance of Michigan's first farm journal, the *Western Farmer*, furthered the dissemination of knowledge concerning techniques. This medium not only stressed husbandry as a science, but, like contemporary agricultural organs, it constantly pointed out the profitableness of the "novel" in agriculture. It emphasized the need for bounties and never failed to include silk in any discussion of them. The Georgia bounty law, which provided a cash grant for cocoons, raw silk, and silk manufacturing, was especially applauded. After explaining the operation of bounty laws in Massachusetts, Connecticut, and Maine, the editor argued that "If Michigan knows her interest, she will keep pace with her sister states in encouraging the manufacture of an article, for which, rising *twenty-three millions of dollars*, in gold and silver, was last year shipped to foreign countries to pay for."[9]

References to silk were numerous in the first issues of the *Western Farmer*. A. C. Holt of Washtenaw County took the initiative in introducing the subject and stressed primarily the economic advantages to the Nation. His comments about the extent of silk interest and activity in the State are rather enlightening, for he declared:

> There are many who intend to engage in this pursuit of labor the ensuing year, and as it is new to most of them, I will give what information I have obtained by experience and observation, to the readers of the Farmer. I am too well aware that many of our farmers have imbibed very erroneous impressions with regard to the culture of silk. . . . I shall not attempt to enter into a wild speculation, but shall confine myself to facts and experience.[10]

In later articles Holt attempted to describe in detail the processes involved for those interested in engaging in sericulture, but he tended to be more speculative about the possibilities and future of silk than practical. His most useful suggestions were advanced in an article discussing the cocoonery.[11] Later, he advertised that he had equipment for sale and implied that by its use farmers could avoid previous pitfalls.[12] Other articles emphasized the necessity for education about silk among the rural inhabitants of Michigan and indicated that American silk was definitely superior to that of France.[13] Holt likewise implied that the failure of the Michigan experiments in the past had been the unfortunate result of securing inferior eggs and recommended cocoons of the Peanut variety.[14]

To encourage the new industry, the *Western Farmer* played up the degree and progress of the venture in other States.[15] The quality of Michigan manufactured silk was brought to the readers' attention with regularity,[16] and a market for farmers living outside manufacturing centers was implied, although never definitely assured.[17]

It is difficult to determine the degree of interest in silk aroused by enthusiasts like Holt. The letters to the *Western Farmer* indicate that some thought was given to the subject. Quite typical are the comments of a Lapeer County farmer, who had pioneered independently of Holt and his friends. He reported success and declared that he had "a quantity of worms this summer, and wound part of the cocoons, and manufactured some

[6] Marshall *Western Statesman*, Feb. 20, 1840.

[7] U. S. Bureau of Census, *Compendium of the Enumeration of the Inhabitants and Statistics of the United States . . . Being a Compendium of the Sixth Census*, 324 (Washington, 1841).

[8] *Ibid.*, 378.

[9] *Western Farmer*, 1:9, 15 (Detroit, Feb. 2, 1841). Changes in ownership of this journal did not materially alter its policies.

[10] *Ibid.*, 1:2 (Jan. 19, 1841).

[11] *Ibid.*, 1:66 (May 3, 1841).

[12] *Ibid.*, 1:111 (July 16, 1841).

[13] *Ibid.*, 1:20 (Feb. 16, 1841).

[14] *Ibid.*, 1:25 (Mar. 2, 1841).

[15] *Ibid.*, 1:153, 154, 158 (Oct. 15, 1841).

[16] *Ibid.*, 1:173 (Nov. 22, 1841).

[17] *Ibid.*, 1:125 (Aug. 16, 1841).

sewing silk, which is pronounced equal to any imported. I am satisfied every farmer's family will find it profitable by attending to the business. I shall feed some thousand worms next year."[18]

The agricultural societies also played an important role in suggesting the possibilities of silk. Its inclusion, in various stages, on premium lists of awards was not unusual.[19] The Calhoun County Agricultural Society appointed a committee on silk which reported that "The soil and climate of Michigan offer the most flattering prospects to the silk grown. In this vicinity, experiments have tested the fact, that the chinese mulberry or morus multicaulis will succeed without annual transplantation, and in fact that the trees which are permitted to remain during the winter, produce a greater abundance of foliage and escape uninjured."[20]

Apparently the only distinct organization devoted exclusively to the promotion of silk culture was the Lenawee County Silk Growing Society. Although its formation may have been stimulated by discussions of the county agricultural society, there is no evidence to indicate that such was the case. Farmers who had become interested in the possibilities of silk suggested the initial meeting in Adrian on September 13, 1841 at which a permanent organization was effected. The preamble of the constitution stated that not only would the raising of silk be profitable "but that [the tasks involved] would also produce a most salutary effect upon the *habits* and *morals* of society in general, by furnishing a profitable employment to the industrious poor, the orphan female, and children of both sexes." One committee was appointed to memorialize the next session of the legislature to secure assistance "for the promotion and encouragement of silk growing," while another was selected to inventory the status of silk in the State. The fact that two of the founders of the organization exhibited specimens of sewing silk implies an interest in its manufacture, although this topic was not considered officially. The editor of the *Western Farmer* reported that the spirit of the meeting indicated success for the venture and expressed the hope that other counties would follow the example of Lenawee "until silk growing is as familiar to the working population of our country, as the culture of flax and wool is to the Yorkers, or cotton and tobacco to the Southerners."[21]

Advertisements in Michigan journals by out-of-State companies undoubtedly helped to call attention to the infant industry. Moreover they suggest that commercial houses regarded Michigan as a potential market. A typical advertisement was the announcement of William Prince of Flushing, New York, that he had 100,000 mulberry trees for sale at $30 per thousand.[22]

By 1842 manufactured silk products were receiving a share of the attention. The fair of the Monroe County Agricultural Society, which previously made no provision for silk awards, voted Mrs. Walter P. Clarke $5 because "The committee have been highly gratified with the specimens of Silk raised.... The sewing silk is a fine quality, and equal, if not surpassing, that which is brought from abroad; and embracing some 16 or 18 different qualities and colors. The coloring was also done by Mrs. Clarke from the variety of Flowers in her garden. The manufactured articles consisting of silk Stockings and Mitts, made from the silk of her own raising, cannot be too highly appreciated by the Society...."[23]

Few of the farmers who tried silk culture recorded their success or failure, but a rather sober and hopeful evaluation can be observed in the opinions of a Jackson County farmer who sent the editor of the *Michigan Farmer* some skeins of sewing silk made by his family, together with the following summary of his experience.

> The silk is the first made and much better than I expected to be able to produce being a novice in the business.... I commenced in the business with but little faith of ever being able to raise Silk to any profit, but the experience of one year, has convinced me that the business can be profitably carried on as a collateral branch of husbandry by every farmer in the country...
>
> The Silk I send you was reeled upon a Piedmontese Reel, and twisted on a common wheel. To get good, brilliant colours requires some experience; I have succeeded better in that part of the business than I expected.... I have found a ready market for all my Sewing Silk at $4 per 100 skeins.
>
> My experience in the business has not discouraged me. I am feeding the present season, a fine crop of worms, they have moulted the third time, and have been uniformly healthy. I use lime on them very freely, and I feed them wholly on the leaves of the Morus Multicaulis. I let the trees remain in the ground during the winter, and they have never sustained but little injury from the frost. I get foliage much earlier than I possibly could from cuttings planted

[18] *Ibid.*, 1:145 (Oct. 1, 1841).
[19] *Ibid.*, 1:185 (Dec. 31, 1841).
[20] *Ibid.*, 1:178 (Dec. 8, 1841).
[21] *Ibid.*, 1:154 (Oct. 15, 1841).
[22] *Ibid.*, 2:71 (June 1, 1842).
[23] *Ibid.*, 2:146 (Dec. 9, 1842).

in the Spring. If the business could receive suitable encouragement and protection from Government, it would be but a few years before the United States would raise her own Silk. *Protection to home industry* is all that we need.[24]

The arguments advanced by this writer, in spite of his apparent optimism, indicate that many of the prophecies about silk had not materialized.

As the year 1843 advanced, the advocates of sericulture became more realistic. The repeated references to the proper kind of cocoon and tree imply that numerous failures were being attributed to improper selection. The profits ascribed to silk were far more conservative than those previously advanced. Testimonials of success were fewer in number. Most of the comments were the result of experience rather than extravagant boasts. Although a few persisted in the older arguments, new notes are reflected in the following statements of an experienced farmer:

> The Mulberry can now be purchased cheap; a Mulberry orchard can be reared with facility, and the raising of silk commenced the first season of planting the orchard. A suitable cocoonery can be built at small expense, and children can be employed in picking the leaves and feeding the worms; and the females of the family, can reel the silk from the cocoons and prepare it for market.
>
> Another inducement is, the cost of transportation. . . . The raw silk is worth from $4 to $5.00 per pound. It will cost no more to transport a pound of silk to market, than a pound of flour—so that this consideration alone should induce us to embark in its production, if its production is practicable in this climate. . . .
>
> Another consideration with many, is, that it requires but a small investment in land.—One acre planted with Mulberry will produce more clear profit than many acres appropriated to the production of any other article.—One acre of Mulberry will feed worms sufficient to make one hundred pounds of raw silk. . . .
>
> Another consideration is, that it costs nothing to *winter* the *mulberry* or the *worm*.—Every other animal of the farm has to be wintered one, at least, and most of them many winters, before any thing can be realized from them. But the Silk Worm is dormant, or rather in the *egg*, during the winter season, and consequently costs nothing to winter.[25]

At the same time advertisers were making their strongest appeals. In May 1843, J. Dewey of Jackson County, who had written extensively on silk, announced that he had "for sale Multicaulis trees or cuttings, and Silk Worm Eggs—all of his own raising." Jonathan Keeney of Detroit advertised *Morus multicaulis* trees of the second and third year's growth and silkworm eggs of the previous year's hatching. G. M. Haywood and Company, commission merchants of New York, requested samples of reeled silk and promised liberal advances on consignments of raw silk and cocoons.[26] Hints of the national interest in silk appeared in the pages of the *Michigan Farmer*. The editor borrowed a picture of the Piedmontese reel from the *New Genessee Farmer* and quoted freely from the same source any articles that considered possible problems in raising either silkworms or mulberry trees.[27]

The discussions of reels and methods of winding and praise of the finished product indicate that local manufacturing was still being encouraged. The *Michigan Farmer*, in reporting on Dewey's thread, said:

> In our brief life-time, we have had the pleasure of examining many specimens of American sewing silk, but believe the article before us decidedly superior to any we have previously seen.—It is fine, glossy, of an even texture, and well colored. The specimen embraces *six* rich, fancy colors. There is one peculiarity worthy of notice, and which renders this silk more durable than that of foreign manufacture:—though very fine, each thread contains *three stran*. . . . We are informed that he is now manufacturing about *six thousand skeins* of sewing silk—which we doubt not will, as it should, find a ready sale among the friends of "Home Industry and Manufacturing". . . .[28]

Apparently, lack of a market and not quality was the obstacle to progress. No doubt, many approved of the suggestion of a Washtenaw farmer that the products should be sold in neighboring towns by agricultural associations.[29]

Interest in sericulture waned rapidly in the closing months of 1843. Agricultural societies ceased to mention the product and advertisements disappeared. The few reports for 1844 admitted that much humbuggery accompanied the silk boom and reiterated that success depended largely upon healthy stock and numerous hands. One of the

[24] *Ibid.*, 2:82–83 (July 20, 1842).
[25] *Michigan Farmer and Western Agriculturist*, 1:161 (Jackson, Dec. 15, 1843).
[26] *Ibid.*, 1:54, 62 (May 15, June 1, 1843).
[27] *Ibid.*, 1:141 (Nov. 1, 1843).
[28] *Ibid.*, 1:133 (Oct. 16, 1843).
[29] *Ibid.*, 1:138 (Nov. 1, 1843).

last references to silk culture in Michigan illustrates this down-to-earth attitude very well.

> Now, is it not a duty which we owe to ourselves, and to our country—especially, those of us who have large families—to engage more or less extensively in this branch of domestic industry. . . . The rage of speculation is over: the sober realities are beginning to come upon us, and those who have persevered, and braved the charge of fanaticism, are beginning to reap the reward of their toils. It is true, that our climate is far north . . . but we have a season that will produce as valuable crops, and as productive, as at any place in the world. . . . The business is, in itself, simple. . . . It is a fireside business, a home industry—and also a branch of agricultural production. The season occupies a time between seeding in the spring and harvest. . . . As soon as the cocoons are secured, they can be stowed away, and the reeling resumed at any convenient time. . . .
>
> It is important, however, that those who are commencing the business to be sure that they procure a good and healthy crop of eggs; for a sickly stock produces an uncertain crop, and often proves an entire failure. . . .[30]

[30] *Ibid.*, 2:33 (Apr. 15, 1844).

Emphasis upon silk apparently disappeared entirely with the efforts of 1844. This trend was universal throughout the Nation, and the causes of failure in Michigan are similar to those in other midwestern areas. The death of numerous trees or cocoons or both undoubtedly discouraged many farmers, although conditions in the State seem to have been more favorable than in many localities. The lack of a national market prevented the farmer from selling silk as readily as he could other products. The task involved in reeling made preparation for manufacturing, even if the sale had been guaranteed, a task requiring too much effort. A failure to distinguish between the raw silk and manufacturing stages was another blunder. The extravagant promises made by silk enthusiasts were not fulfilled, so that even a portion of the anticipated profits were not realized. All these factors, added to the unwillingness of the legislature to grant a bounty, as many had hoped, prevented sericulture from gaining even the initial trial so essential for a stable agricultural basis.